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JULY

1920

The After-Treatment of some Surgical Cases.*

By SIR D'ARCY POWER, K.B.E., F.R.C.S.E.

Surgeon to, and Lecturer on Surgery at, St. Bartholomew's Hospital, etc.

I HAVE chosen the subject of the after-treatment of some surgical cases, because I think that sufficient attention is not paid to it.

In an institution such as this, where of necessity much is done according to routine and the work is crystallized by tradition, things appear to "happen" in so orderly a manner, that you do not trouble to enquire about what occurs from the time the patient leaves the operating table until he is discharged, cured, a few days or weeks afterwards. It will be far otherwise when you get into private practice. *We* shall then come and operate; *you* and the nurse will be left to carry on the after-treatment to the best of your ability. Too many will then think: "I wish I could remember what they used to do at the hospital." My object now, therefore, is to draw your attention to the subject whilst you are in the full swing of ward work. Watch what we recommend,

* The substance of two clinical lectures delivered at St. Bartholomew's Hospital.

see what the house-surgeon does when he is in a tight corner, and, above all, learn from the ward-sisters every "tip" you can; their experience is great, and they are always ready to place it at your disposal, if you ask for it at appropriate times.

As no clinical lecture should be given except in the presence of a patient, I show you this boy, whose leg I amputated last week, as an example of a straightforward surgical operation. You will remember that I showed him to you a few days ago as an instance of general infection following upon an osteomyelitis of the tibia. He was then very ill, with a hectic temperature, necrosis of his tibia, blood, pus, and casts in his urine. I told him that he must either lose his leg or his life, and, like the brave little Blue Coat boy that he is, he agreed at once to amputation. His thigh was removed in the lower third, 10 days ago; he had a secondary hæmorrhage five days later, which was recognized so promptly that the sister put on a tourniquet and within half-an-hour I had tied his common femoral artery. Five days after this second operation, and 10 days after the amputation, you see him on the high road to recovery.

With regard to the anæsthetic, Mr. Boyle's elaboration of the gas and oxygen method has the great advantage that the patient recovers very quickly from its effects, whilst in a large proportion of cases there is no after-sickness. A disadvantage of rapid recovery is that the patient feels a good deal of post-operative pain, which is not so pronounced with the slower recovery from ether and chloroform, during which the senses remain dulled much longer.

Post-anæsthetic Vomiting. — The smell and the vomiting both have to be combated after ether and chloroform anæsthesia. The smell of ether can be lessened by equal parts of eau-de-Cologne and water, used on a handkerchief, or sprinkled on the beard or moustache. The taste can be reduced by ordering a mouth-wash of carbolate of soda (phenol, 8; caustic soda, $3\frac{1}{2}$; distilled water, 100), diluted 10 or 20 times; or phenol, 6 grs; citric acid, 5 grs., to an ounce of eau-de-Cologne diluted to 2 oz. with warm water. The degree of vomiting varies with the length of the operation, with the previous preparation of the

patient, and, to a considerable extent, with the individuality of the patient; for just as some people are always seasick or trainsick and others are not, so some always vomit after an operation and others do not. Vomiting is worst and most prolonged after operations for the removal of enlarged cervical glands.

When vomiting is not very severe, sips of hot water may be given; in more persistent cases, 15 grs. of bicarbonate of soda may be dissolved in a tumblerful of hot water. The patient vomits it directly, but the sickness afterwards subsides. In very severe cases, give nothing by the mouth, but a sedative enema may be administered, consisting of bromide of potassium, 20 grs.; chloral hydrate, 20 grs.; mucilage of starch, 2 oz. I have never had to wash out the stomach for post-anæsthetic vomiting; but, were it necessary to do so, remember that the art of passing a stomach-tube successfully is to have the patient leaning forward so that the muscles and tissues of his neck are relaxed, otherwise the tube will enter the larynx instead of the œsophagus. It is sometimes a good plan, when the vomiting has been unduly prolonged, to feed the patient with solid food, rather than to restrict him to "slops."

Pain.—Under the ordinary conditions of aseptic surgery, pain is not a characteristic of modern operations. What patients feel is a dull ache, which in most cases is bearable, and is far different from the acute agony which lingers in the lay mind as a reminiscence of the septic wounds of pre-Listerian days; after abdominal operations the pain is usually felt as "wind," and the patient complains of wind more than actual pain. I have already warned you that pain is felt more acutely after gas and oxygen anæsthesia than after the administration of other anæsthetics, so that it may be advisable to inject one-hundredth of a grain of hydrobromide of hyoscine

before the operation, or one-quarter of a grain of morphia before the patient leaves the table. When pain persists, try and ascertain the cause. If it is local, examine the dressings and make sure that the skin has not been transfixed by the safety-pin fastening the bandage, or, if a collodion dressing has been used, that the ends of the catgut sutures have not been left so long as to have become entangled in the meshes of the gauze and thus drag upon the wound. If there is no local cause and the pain continues with a quickened pulse, a rising temperature, and insomnia, it is of bad omen, for it is evidence of septic infection, which you must be on the alert to combat.

In most cases, 15 grs. of aspirin will relieve the pain, and the dose may be repeated in four hours. In abdominal cases, aspirin is better than morphia because it does not mask the symptoms of peritonitis. Morphia, too, causes a furred tongue, interferes with the appetite, and leads to abdominal distension and some blurring of the mental faculties. I prefer not to use it unless I am obliged, and then I give a full dose, for when the pain is severe half a grain is more effective than two quarter of a grain doses.

Drainage.—When a drainage-tube is employed in a wound that should heal by first intention, it is removed at the end of 24 hours, or at the very latest within 48 hours. As an instance of such a wound, think of an amputation of the breast; the tissues in the axilla are so lax that there is always subsequent oozing, and a drainage tube is necessary. Select a tube of sufficient calibre not to get blocked by blood-clot, and so place it in the axilla as to allow of a free flow through it. When you remove the tube, treat the incision in the skin through which it passed as you do the rest of the wound. This is too often neglected, and the hole made for drainage may continue to suppurate long after the rest of the wound

has healed soundly. There is a tendency to leave a drainage tube in position for an unduly long time when the gall-bladder or the appendix region has to be drained. When adhesions have been formed the drainage tube has done its work, and it is better to replace it by a light packing of gauze. Ask the patient before you, when the tube was removed from his amputation stump; he will tell you, at the end of 24 hours, and he was very glad to be rid of it.

Aperients.—Enquiry amongst the ward-sisters will prove that they are unanimous in the use of castor oil after operations. They give from 6 to 8 drms. on the third night after the operation, supplemented when necessary by a soap and water enema. If you ask why they prefer castor oil to other aperients, you will be told that it disturbs the patient less, it acts once or twice with satisfactory results, and its action is followed by a slight constipation. When the patient objects to castor oil, I generally prescribe 2 or 3 grs. of calomel, with half a grain of pulv. opii to prevent griping, or 1 gr. of calomel hourly for five hours if necessary. Mist. alba is the most satisfactory routine aperient afterwards whilst the patient is confined to bed and during his convalescence. It is, I think, better than the senna pods or cascara upon which so many nurses pin their faith.

Sutures.—Sutures are removed seven days after they have been inserted, except in a few cases to which I shall refer presently. They are nearly always of silkworm-gut or horsehair, and their removal is painless. There still lingers in the mind of the public a recollection of the time when we used sutures of silver wire, the removal of which was a veritable torture; it is usually necessary to tell the patient that the removal of sutures is about as painful a process as having the hair cut. For their removal, use a pair of sharp-pointed scissors, not too light, and a pair of

dissecting forceps. Pick up the knot and cut the suture as near the skin as possible, so as not to drag more than is necessary through the wound. Do not try to pull the knot through. The exceptions to the rule of removing the sutures on the seventh day are: (i) in the face, when they should be removed on the third or fourth day; and (ii) after the reduction of an intussusception, when they should not be taken out for at least 10 days or a fortnight. The reasons are obvious: in the face, repair takes place with great rapidity; in the abdominal wounds of children, there is often a great tendency for the wound to give way, when the operation has been completed hurriedly and the sutures have been passed through the entire thickness of the abdominal wall. When the abdomen has been sutured in layers in the ordinary manner, no such accident is likely to happen. Wounds heal nowadays with such facility that you will have to warn your patients that the removal of the sutures and the union of the skin incision does not mean they are cured. Time must be given for the scar to consolidate, and many operations, which have healed by first intention, are marred by the energy of the patient, which leads him to put weak scars to unduly severe tests. You must, therefore, curb the zeal of the girl who wants to play in the next hockey match or tennis tournament, or of the boy who must get into the team or eleven within a few weeks of the removal of the appendix or a radical operation for hernia.

Feeding.—Milk is usually thought of as a fluid; you must accustom yourselves to think of it physiologically, *i.e.*, that it curdles in the stomach and may need considerable digestive power to render it useful to the body. Give it with discretion, therefore, and, if necessary, pre-digest it, always remembering that Benger's food and peptonized milk can be made palatable, or the reverse, according to the amount of

care bestowed by the nurse on its preparation. Milk is not a satisfactory food for babies after hare-lip and cleft palate operations, unless the greatest care is taken to cleanse the mouth after each feed by gently spraying it with a scent spray, containing warm saline solution or a very dilute solution of listerine.

Patients who have been submitted to gastrostomy for cancer of the stomach are always more than half-starved owing to the dysphagia from which they have suffered. They should be fed with a liberal supply of beef or mutton essence as soon as they recover from the anæsthetic, and they are better for a little alcohol. Be careful that the tube in the gastrostomy wound, through which they are fed, is firmly anchored. It may slip into the stomach. The accident is alarming to the attendants; but I have never seen any bad result from it, except in cases in which resolute, but futile, attempts have been made to fish it out.

Feeding after gastro-enterostomy needs somewhat greater care immediately after the operation, but if you grasp the principles involved, you will have no difficulty in carrying it out. The peritoneal surfaces must be allowed time to adhere round the opening made in the stomach and jejunum. Experimentally, there is no leakage after the seventeenth hour, so that if you allow a rest of 24 hours after the operation you will be on the safe side. Do not allow the patient to swallow anything during this time. He may wash his mouth out with a little warm water, and if thirst is complained of, a rectal saline will assuage it. At the end of 24 hours, give drachm doses of whey every half-hour for the next three hours, and then increase the quantity to an ounce every hour for the next three hours, varying the whey with weak tea to which a little milk has been added. The quantity may then be increased to 5 ozs. every four hours, and essence, glucose, or similar foods may be substituted. The

principle is to allow food to trickle through the stomach without distending it. Nature, fortunately, resents even moderate distension in these cases, for vomiting occurs if too much food is given. Vomiting must be taken as an indication to stop all feeding for a time, and then to begin again with smaller quantities at longer intervals.

Patients who have left hospital greatly improved by gastro-enterostomy often return, saying that they have had a recurrence of the symptoms. Enquiry shows that they have become constipated, or have committed some indiscretion in diet. I usually find that a little advice and a few doses of gentian and rhubarb cure them. The advice consists in giving them rules for diet, and for these I am indebted to Dr. Hurst. Shortly they are: Avoid alcohol and effervescing drinks. Do not eat raw or cooked fruits which have skins or pips. Raw vegetables are bad, so that Londoners must be told not to eat watercress, of which they are inordinately fond; cooked vegetables should be taken in the form of spinach. Vinegar, lemon-juice, and condiments are unsuitable. The Scotsman is hard hit because porridge is not good for him under these conditions. The prohibition extends to new bread, tough meat, salt fish, high game, and soups. There are the further injunctions to eat slowly, chew thoroughly, and smoke very moderately. It is better, therefore, to avoid having a duodenal ulcer or any gastric condition which needs short circuiting for its relief.

When a baby has been operated upon for intussusception, it should be fed—at the breast if possible—as soon as it recovers from the anæsthetic. After operations on the gall-bladder, when there is a biliary fistula, the excretion of bile is often greater at night than in the daytime. The flow can be reduced if the patient is fed at intervals during the night.

Medical Notes.

(Second Series)

(*concluded*).

By SIR THOMAS HORDER, M.D., F.R.C.P.
Physician, with charge of Out-patients, to St. Bartholomew's Hospital, etc.

SOME ABDOMINAL CONDITIONS.

IN examination of the abdomen careful inspection is probably, of all the methods employed, the most frequently neglected; and yet it is often the most profitable. It should be carried out from the side of the bed, from the foot, and, unless the case is an acute one, with the patient standing up.

(130) When faced with an obscure case of enlargement of the abdomen, it is sometimes useful, in judging the cause, to consider the various anatomical structures that are met with in an imaginary section through the abdomen, and the various pathological changes to which these structures are liable and to which the increase in size may be due: *the parieties* (fat, œdema); *the peritoneum* (ascites, tuberculosis, disseminate growth); *the mesentery* (tuberculosis, lymphadenoma, disseminate growth); *the omentum* (fat, cyst); *the hollow viscera* (dilatation of the stomach and colon, gastric and intestinal tympanites); *the solid viscera* (neoplasm and special forms of visceral enlargement, such as hepatic, renal, and splenic enlargement); *the retro-peritoneal tissues* (neoplasm).

(131) Tympanites, both gastric and intestinal, is sometimes caused by chronic alcoholism. The condition may become so serious after an extra bout of drinking as to raise the question of intestinal

obstruction.

(132) There is scarcely anything within the abdomen that may not share in a severe enteroptosis; even the abdominal aorta may be freely movable and considerably displaced.

(133) Congestion of the liver in dilatation of the heart may be a more acute affair than is sometimes realized. It may lead to such rapid enlargement of the organ, and may cause so much pain and tenderness that the condition comes to simulate acute inflammation of the organ. It may even lead to puncture or an exploratory laparotomy, in the belief that the patient is suffering from hepatic abscess.

(134) Carcinoma of the colon with ulceration sometimes gives rise to symptoms of toxic absorption; fever, sweats, pains in the joints and fibrous tissues; and this state of things may precede abdominal symptoms or the discovery of an abdominal tumour.

(135) A fairly frequent cause of marked and progressing severe dilatation of the stomach in elderly patients is old gall-bladder adhesions. The treatment is surgical, not a long dissection designed to remove the effete gall-bladder but a gastro-enterostomy for the purpose of draining the stomach—an operation which, in expert hands, can often be done in less than half an hour.

(136) An occasional cause of persisting fever without physical signs, and without positive blood-cultures, is a slowly developing abscess of the liver due to *S. aureus*. Although the condition may have been preceded by some form of furunculosis, the fact may be overlooked, either because the skin lesions have not been very conspicuous, or because there has been an interval between the complete healing of these lesions and the development of the hepatic focus.

Some Surgical Complications of Dysentery.

By R. J. McNEILL LOVE, M.B., B.S.

Late Surgical Specialist 32nd British General Hospital, Mesopotamia Expeditionary Force.

ON the surgical side of a General Hospital in Mesopotamia, one could not help being surprised at the number of beds continually occupied by dysentery and its complications, and the following notes are from such cases.

It is convenient to divide these cases into two groups, one in which surgical treatment was called for on account of lesions actually caused by the amœba or bacillus; and the other, in which surgical treatment was necessary to deal with complications secondary to the dysenteric infection.

I. CASES OF DYSENTERY FAILING TO RESPOND TO MEDICAL TREATMENT.

In the summer of 1916 and early part of 1917, cases of acute bacillary dysentery were common, the illness being sudden in onset, with fever, diarrhœa, tenesmus and a passage of blood-stained mucus, which, in spite of medicinal and serum treatment, rapidly went downhill. Cæcostomies were performed as a last resort in some of these cases, but as they were suffering from severe toxic absorption, the results, as one expected, were discouraging, and operative interference was soon abandoned.

The cases of election for surgical interference are chronic cases which slowly retrogress in spite of

medical treatment. In these it is found that, in spite of anti-dysenteric measures, it is impossible to increase the diet and rebuild the patient's strength. They seem to go down hill merely from starvation. They tolerate a diet scarcely or not even sufficient to maintain metabolism, and, when any effort is made to increase it, a relapse immediately occurs. In these cases a weekly record of weight is useful, and a patient who steadily loses weight despite treatment, and in whom it is found impossible to increase the diet, should be considered a fit subject for surgical interference.

Careful observations of the pulse are of extreme importance in forming an opinion regarding the progress of the cases. The rate, tension, and regularity should be frequently observed, and, if emetine is being administered, allowances should be made for the effect the drug exercises on the condition of the pulse.

Usually, three courses are open to the surgeon: appendicostomy, cæcostomy, and ileostomy. In considering which to adopt, it is important to realize exactly how an operation will help the patient. An appendicostomy permits of direct lavage of the colon; but as it has been proved by bismuth enemata that the whole of the large bowel can be reached by rectal injection, appendicostomy seems to be of little value. This was borne out in a few cases in which the operation was performed in this hospital; these derived so little benefit that the operation was soon abandoned.

Cæcostomy and drainage by Paul's tube gave distinctly better results, but drainage was never complete, and in cases in which cæcostomy was performed the condition of the patient seemed to vary in proportion to the freedom of the drainage through the cæcal fistula. It appears that the

essential need of the dysenteric colon is rest, which is well exemplified by the following case.

Pte. P., aged 36, was admitted on July 20, 1918, as dysentery. He had been two years in Mesopotamia, and had had two previous attacks of diarrhœa. This attack began one month before admission, and on admission he was passing 7 to 10 stools a day, containing blood and mucus, and large numbers of entamœbæ histolytica were present. In spite of medical treatment, his condition gradually deteriorated, his weight slowly but regularly fell, and he always complained of pain over the descending and pelvic colon, which was tender on palpation. Towards the end of September his pulse began to increase (110 to 120) and to become irregular, and it became obvious that, unless something was done for him, medical treatment held out little chance of success. On October 7 cæcostomy was performed, and a Paul's tube tied in, which sloughed off in five days. Free drainage was obtained, very little fæcal matter being passed *per rectum*. The large intestine was flushed through twice a day with weak quinine and eusol alternately, and the patient very soon began to improve. His bowel condition was satisfactory up to the end of the third week after the operation, and he was already looking and feeling better. Unfortunately, at this time, drainage from the cæcostomy diminished, although efforts were made to keep the cæcostomy patent by dilatation with the finger, rectal bougies, etc., but drainage remained inadequate, there being less and less discharged from the cæcostomy. The patient's condition began to deteriorate rapidly, diarrhœa with blood and mucus returning and the pulse increasing in rate. A second operation was therefore decided on and performed five weeks after the first. An incision was made one inch above and to the inner side of the cæcostomy wound, the ileum divided close to the cæcum, the lower end closed and the upper end brought out through the incision and a Paul's tube tied in. The cæcostomy wound was allowed to close completely, being utilized for lavage as long as possible. After a few days the Paul's tube sloughed from the ileostomy, and the patient's condition rapidly improved, appetite and ability to take food increased, he put on weight, and a month after the second operation he sat out of bed, the first time for six months. Six weeks after the operation rectal wash-outs with saline were returned without any trace of blood or mucus, and no amœbæ could be found. Six weeks later a lateral anastomosis between the ileum and ascending colon was performed, the patient making an uneventful recovery.

In considering the relative merits of cæcostomy and ileostomy, the former is easier to perform as well as to close when no longer needed. Cæcostomy also allows free and easy irrigation of the large intestine from cæcum to anus. However, drainage by

cæcostomy is apt to be very uncertain. In several cases in which it was performed, satisfactory drainage was obtained, but in others very little bowel contents was discharged through the cæcal fistula. Possibly this difference depends on variation in the anti-peristaltic movements of the ascending colon in different patients. On the whole, ileostomy appears to be the more satisfactory operation, in that it provides absolute rest to the diseased colon, which is not irritated by undigested food, nor is there any passage of fæcal material to stimulate peristalsis. If ileostomy is performed a few inches from the cæcum, the continuity of the bowel can be restored by lateral anastomosis of the small intestine; else the final operation may consist of implantation of the small intestine into the ascending colon.

In conclusion, appendicostomy seems to be of little value, and although cæcostomy is sometimes satisfactory and requires less operative skill to perform and close than ileostomy, the latter affords the maximum amount of rest to the colon, which, apparently, is of far greater importance to the inflamed colon than local treatment, and if lavage is required it can be carried out *per rectum.*

Liver Abscess.—In a previous article,[1] I have alluded to the salient features of this condition as seen in Mesopotamia. Amœbic abscess of the liver was by no means uncommon among our troops, and during 1917–18 over 30 cases were diagnosed and treated in this hospital, besides which many convalescent cases passed through in the course of evacuation from other hospitals.

The signs and symptoms presented by these cases varied greatly from those described in text-books. Some of the cases were surprisingly acute in onset. In one case, the patient was quite well until ten days before operation. A liver abscess was drained, but

eight days later he died, and four other abscesses were found post mortem. Another man, who had spent his life in England until sailing direct for Mesopotamia, found himself in hospital less than a month after landing in the country. He was suffering from liver abscess, about a pint of pus was evacuated, and amœbæ found in the subsequent discharge from the sinus.

In well-marked cases, the diagnosis is not usually difficult; a history of attacks of diarrhœa is commonly elicited, and entamœbæ histolytica are generally found in the stools. The patient usually complains of progressive weakness, anorexia, and not uncommonly pain in the right shoulder or hypochondrium. An acute onset sometimes occurs, and is probably due to a latent abscess becoming infected, or reaching the surface of the liver and causing a localized peritonitis. Peritonitis and basal pleurisy account for most of the acute exacerbations occurring during the course of the disease.

Vomiting is a symptom which occasionally occurs, especially when the abscess is pointing from the under-surface of the liver, or situated in the left lobe. Jaundice, with a trace of bile in the urine, was noticed in one case. An oscillating temperature is the rule, although in one case the temperature was not above 99° until three days previous to the evacuation of a large abscess. The pulse-rate is relatively slow in proportion to the temperature.

Except in small, single abscesses, enlargement of the liver can usually be demonstrated by the X-rays. In typical cases, screening may show the liver to be enlarged upwards, the excursion of the right leaf of the diaphragm to be limited to 1 inch or less on a deep inspiration, and possibly a conical projection of the right cupola, indicating a pointing abscess—any of which signs are of great value in supporting the

diagnosis of liver abscess.

The cytological examination of the blood usually shows a leucocytosis and increased proportion of polymorphic cells, the most impressive white cell count being 43,000 per c. mm. with 89·8 per cent. polymorphonuclear cells.

The blood examination is especially useful in distinguishing simple and suppurative inflammation of the liver. On one occasion, a case was admitted to the surgical side as liver abscess. He had been recording an irregular temperature of 99° to 102° for three weeks, had decided hepatic enlargement, and was negative to malaria. His blood count showed 18,500 leucocytes, but of these only 60 per cent. were polymorphic. The condition proved to be one of dysenteric hepatitis, and responded to dieting and emetine injections.

Another condition simulating liver abscesses was a curious syndrome locally termed "Bink's disease," so called from the M.O. who first drew attention to it (Capt. H. B. Binks, R.A.M.C.). The clinical features of this condition were progressive weakness, irregular temperature, mild diarrhœa, and occasionally moderate enlargement of the liver and spleen. With the exception of secondary anæmia, a mild leucocytosis (12,000 to 20,000) with an increase of mononuclear cells and proportionate decrease in the number of polymorphic cells, all pathological reports on blood, stools, etc., were negative. This condition frequently baffled all treatment both rational and empirical. The illness lasted many weeks, and often terminated fatally; the only constant condition *post mortem* was slight, irregular, patchy ulceration of the mucous membrane of the lower ileum and colon. Occasionally, sub-mucous hæmorrhages were noticed in the valvulæ conniventes in the ulcerated area, and more commonly moderate enlargement of the liver and spleen.

Dysentery, enteric, and tuberculous disease were always excluded, and the nature of these cases remained a mystery.

As a liver abscess is frequently accompanied by compression of the right base of the lung or effusion in the pleural sac, it may readily be confused with right-sided empyema, and in some cases the exploring needle may be the final court of appeal. Perinephritic abscesses can usually be excluded by examination of the urine, and psoas irritation and other forms of sub-diaphragmatic suppuration by symptoms referring to the primary lesion.

In doubtful cases of liver abscesses with insufficient signs to warrant needling, or where needling was negative, treatment was carried out by dieting and emetine injections. It is possible that in this way small abscesses may be absorbed, but there is also the danger of increasing the resistance of the liver to amœbic invasion, and that a small abscess may become temporarily walled off by a zone of resistant tissue. This zone is an efficient barrier against toxic absorption and further invasion of the liver only as long as the patient is under good conditions (*e.g.*, in hospital); on returning to the privations of Active Service, the general resistance of the patient again becomes lowered and the abscess may recommence its work of destruction. Hence, cases of suspected liver abscess which apparently recover with treatment, should be kept for a considerable time under close observation, and if possible evacuated to a healthy climate.

When pus is suspected, the liver should be needled, the exploration being conducted in the theatre, so that, if successful, further surgical treatment may be proceeded with.

In this hospital it has been the custom, on discovering pus, to leave the needle *in situ*, and excise

a piece of rib as for an empyema; the costal and diaphragmatic pleuræ are then sutured, and the diaphragm incised at right angles to the direction of the muscular fibres, so that its contractions will not interfere with drainage. Using the needle as a guide, the liver tissue is gently broken down until the abscess is reached. The abscess is drained by a rubber tube wrapped in gauze, and the healing frequently assisted by irrigation with weak quinine solution. By this means, free exit is given to the pus, which is sometimes too thick to permit of aspiration.

In one case, in which pus was confidently expected, ten punctures failed to reveal an abscess, although flakes of thick material resembling lymph were sucked into the syringe. As the liver was also enlarged downwards, a laparotomy was proceeded with and two abscesses on the under surface of the liver discovered and drained. The patient died the following day, and *post mortem* four abscesses in the left lobe and thirteen in the right were discovered. The needle was of wide bore, but the pus in the abscesses was thick and gelatinous, apparently too thick to flow, for it is highly improbable that with so many abscesses present one or more were not tapped.

Several cases passed through this hospital in which an abscess was aspirated and quinine (30 gr. in 10 ℥ of water) injected into the cavity. In cases with a single abscess, and when the pus is thin and can readily be aspirated, this treatment seems to be sufficient. However, in one case the complete operation was the means of relieving the patient of a second abscess which spontaneously emptied itself into the existing sinus, after which the patient's convalescence continued uninterruptedly.

Abscesses pointing towards the peritoneal cavity are opened and drained through an abdominal in-

cision. A course of emetine (1 gr.) daily for 12 days is usually given after the operation.

The prognosis of liver abscess in Mesopotamia was invariably grave, for the abscesses were frequently multiple. In cases in which the abscess was single, the immediate chances of recovery were good. However, with regard to one patient, in whom it was thought that the abscess which had been drained was solitary, subsequent information showed that he died from a second abscess in another hospital; it is impossible to say how many cases apparently cured subsequently developed further abscesses, or which were evacuated with small or latent areas of suppuration already present.

Below is a summary of the last 30 cases of liver abscess which have formed the subjects of these notes :—

SUMMARY.

Apparently cured and patient evacuated	11
Apparently cured and patient subsequently died from further abscesses	1
One or more abscesses drained, but further abscesses found *post mortem*	13
Abscess suspected, undiscovered on needling, but found *post mortem* in Spigelian lobe	1
Two abscesses present—one causing death by rupture into the inferior vena cava	1
Single abscess drained, but death due to post-operative shock	1
Single abscess drained, but death due to asthenia 17 days later	1
Single abscess drained, but patient died 18 hours later with acute dilatation of the stomach	1
Total	30

Apparently cured - 11
Minimum mortality - 63·3 per cent.

In this series of cases, one was impressed by the acuteness of symptoms which sometimes preceded the disease, the rapidity with which the disease progressed, and by the fact that in the majority

of cases the abscesses were multiple (in one case 19 being present, amœbæ being found in the pus), features of the disease very unlike the text-book descriptions of "Solitary Abscess."

II. SURGICAL CONDITIONS SECONDARY TO DYSENTERIC INFECTION.

Peritonitis.—In some of the acute cases of dysentery the bowel-wall is so de-vitalized that it allows the escape of organisms directly into the general peritoneal cavity. This is similar to the infection of the hernial sac in strangulated herniæ, with the difference that in the case of dysentery the bowel is de-vitalized by infection, whereas in strangulated herniæ escape of organisms is secondary to vascular changes.

In one case, purulent general peritonitis supervened five days after the onset of acute bacillary dysentery. A laparotomy was performed and drainage tube inserted. A *post mortem* the following day revealed the colon acutely inflamed, œdematous, with submucous hæmorrhages, but no perforation of this or or any other viscus.

A more common cause of acute peritonitis was leakage from a dysenteric ulcer, or in some cases actual sloughing of areas of the bowel. These cases usually occurred during an attack of acute amœbic dysentery. Naturally, they did badly, for, owing to debility of the patient, the tissues were usually not sufficiently resistant to localize the infection to any great extent.

In two cases, it was possible to suture a defect in the bowel; but in many cases the bowel wall was too friable to hold sutures, and one was forced to be content with drainage, hoping for the formation of a fæcal fistula. Possibly ileostomy might have helped these cases.

Appendicitis.—Pain in the right iliac fossa during

dysentery is common, usually being due to changes in the cæcum. In some cases, œdema and infiltration round the appendicular orifice possibly predispose to obstruction of that organ, and efforts to empty itself are sometimes responsible for the colicky pain frequently met with in dysentery.

Five cases were operated upon as appendicitis complicating an attack of dysentery. In three of these, a typical dysenteric ulcer was found in the appendix, and on removal of that organ the dysentery resumed its normal course. In the other two cases, the cæcum was at fault; in one, a small leak had occurred from an ulcer, and in the other, part of the cæcal wall had sloughed away, causing a localized peritonitis, indistinguishable from that due to appendicitis. In the three patients from whom the appendix was removed, the dysenteric ulcers would probably have responded to medical treatment. However, their symptoms were sufficiently urgent to indicate exploration, and delay was unjustifiable in that the diagnosis lay between dysenteric appendicitis and perforation of the bowel.

Parotitis.—It has been suggested that this condition, occurring as a complication in an infective disease, is analogous to acute infective pancreatitis; but a more probable cause is direct infection from the mouth along Stenson's duct. Certainly, these cases were more common in the earlier days when, owing to limitation of personnel, the standard of nursing was below the high level which later prevailed; hence, patients' mouths could not then receive all the attention they merited. It was a very distressing complication for the patient, for by limiting the extent to which he could open his mouth, it greatly increased the difficulties of oral toilet; a vicious circle was thus readily formed. In early stages, as well as in those cases in which parotitis was

liable to occur, risk of infection was minimized by increasing the flow of saliva, secretion of which was not only diminished by the disease, but also by the hot weather. The flow was stimulated by encouraging the patient to suck the juice of oranges, "acid drops," etc., and its increase assisted in flushing out the salivary ducts, and helped mechanically to cleanse the mouth.

Many cases, however, proceeded to suppuration, with œdema of the side of the face, especially over the gland; when suppuration occurred, pus could be expressed along Stenson's duct. Usually no definite abscess cavity occurred, the gland being infiltrated with pus, and on incising below the angle of the jaw and exploring by Hilton's method, not more than a few drachms of pus were evacuated. If untreated, the pus frequently discharged itself through the external auditory meatus.

Occasionally, the tissues superficial to the gland and parts of the gland itself sloughed away, leaving ugly cicatrizing areas. More than half of these cases were bi-lateral, the second parotid becoming infected two or three weeks after the first. The condition was always slow in clearing up, and frequently more than one operation was necessary to drain different parts of the gland.

Arthritis.—It appears that this complication is liable to ensue at any period after dysenteric infection, although it most commonly began during the convalescence of chronic cases. In cases in which anti-dysenteric serum has been given, it is important not to confuse joint symptoms arising from the injection with true dysenteric arthritis.

In cases occurring in this hospital, the patients usually complained of pain and stiffness affecting one joint only, and definite effusion and fleeting pains were uncommon. The knee-joint was most com-

monly affected, the wrist and shoulder occasionally being attacked.

The condition closely resembled the peri-articular form of gonorrhœal arthritis, the ligaments and tendons bearing the brunt of the infection. The condition appeared but slightly affected by treatment, although Scott's dressing and subsequent massage relieved the pain, but as the patient's strength returned, the inflammation slowly subsided.

Many cases of arthritis, for which no definite cause could be found, occurred among apparently healthy men, who had been the subjects of dysentery, and possibly some of the so-called idiopathic causes were results of their former dysentery.

Perinephritic Abscess.—Perinephritic abscess was so frequently met with among men who had previously suffered from dysentery that it was commonly looked upon as a sequela of this disease. It was probably due to the de-vitalized colon allowing passage of pyogenic organisms into the circumrenal connective tissue, which, being uncovered by peritoneum, is in direct apposition with the posterior wall of the colon.

One case, at least, was due to a liver abscess pointing in the kidney region. In this case, prior to the evacuation of pus, the liver could be felt three fingers' depths below the costal margin, and amœbæ were subsequently found in the pus.

In early cases, the patient complained of malaise and pain in the loin, which was especially troublesome during periods of physical exertion. The examination in an earlier case showed little beyond some rigidity over the front of the kidney or tenderness along the outer border of the erector spinæ, together with irregular fever and usually albuminuria. In a few cases, one of the early symptoms was flexion of the hip, which greatly assisted the diagnosis, and this sign usually appeared sooner or later. As

the condition progressed, signs of septic absorption soon became evident, with increasing tenderness and rigidity over the renal area.

After incision and drainage these cases rapidly improved, provided drainage was free and sustained until all trace of suppuration had ceased. This is important because the sinus is a relatively small track leading to a large connective tissue space around the kidney, hence burrowing of the pus is apt to occur, the tracks lighting up again on premature closure of the sinus; in two convalescent cases, in which the wound had healed, a second incision was necessary to permit of further evacuation of pus.

Rectal Conditions.—As one would expect from the tenesmus and engorgement of the bowel which accompany dysentery, complications affecting the rectum are common.

Hæmorrhoids were frequently attributed to an attack of dysentery, but probably in most cases they were already present, and the dysentery caused them to become painful or bleed, and so attracted the patient's attention to the condition. Certainly hæmorrhoids were among the commonest surgical ailments in Mesopotamia, and were particularly in evidence in the autumn after the summer ravages of dysentery.

A very distressing condition secondary to dysentery was prolapse of the rectum, due to continual straining, muscular relaxation secondary to debility, and loss of support to the anal canal consequent on absorption of the fatty tissue in the ischio-rectal fossæ and pararectal tissues.

Possibly prolapse was also encouraged by the trench type of latrine, in using which the man straddles across a ditch in a stooping posture.

A complete Whitehead's operation was occasion-

ally performed when prolapse was accompanied with severe hæmorrhoids, the combination being one of the very few conditions which were thought worthy of a complete Whitehead's operation.

Six cases of carcinoma of the rectum passed through the surgical side of the hospital during the period under review. Five of these patients had previously been in hospital for dysentery, and it was suggested that possibly the malignant disease commenced in a dysenteric ulcer. However, carcinoma was never discovered in any other part of the large intestine, and as carcinoma of the rectum is a disease of young adults, one would naturally expect to find it in men of military age, whereas other forms of carcinoma would be uncommon.

Little was seen of the later sequelæ of dysentery, such as obstruction of the colon, due to scarring, peritoneal adhesions, etc. Cases of amœbic abscess of the brain and spleen are reported,[2] but no definite cases were found at this hospital.

However, the conditions referred to above were sufficient to impress forcibly upon one the many and varied surgical manifestations of the disease, and to cause one to reflect upon the enormous disability among troops, which is due, directly or indirectly, to the different forms of dysentery.

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The Early Symptoms of Cancer of the Colon.

By SETON PRINGLE, F.R.C.S.
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SURGEONS are nowadays agreed that the prognosis following operation for *early* cancer of the colon is more favourable than that for almost any other part of the body. This opinion is based not only on practical results but on the pathology of the condition. The growth remains local in the wall of the gut for a long period; it is rarely disseminated by the blood stream, and the arrangement of the lymphatic vessels and glands is such as lends itself to a true radical or *en bloc* operation, an operation in which the primary growth, the lymphatic glands, and the lymphatic vessels connecting the two, are removed all in one piece.

I have recently been endeavouring to trace those patients on whom I carried out such an operation some years ago. I was frankly disappointed with the result of my investigations. I found that about 40 per cent. had recurrence within periods of less than two years, while only 30 per cent. survived more than five years. Such results, certainly, do not sound encouraging at first sight, but, on analysis of the series of cases, the reason for this high rate of recurrence is obvious. Excluding altogether those cases in which the radical operation was not attempted, on account of widespread disease or extreme cachexia, I found that 33 per cent. of the re-sections were preceded by colotomy for definite intestinal obstruc-

tion associated with distension and vomiting; in 7 per cent. perforation followed by abscess formation had occurred, while in 22 per cent. other organs, such as the uterus, bladder, and small intestine, were involved, and very extensive operations had to be carried out, so that only 37 per cent. of the cases were uncomplicated, or what might be called early cases.

Figures such as the foregoing force the operating surgeon to ask the question: Cannot more of these cases be recognized at an early stage, and so be referred to the surgeon at a time when the operation holds out a good hope of a permanent cure? Surely there must be something wrong with our methods of diagnosis, if such a gross lesion as a malignant growth of the bowel cannot be recognized in almost all cases before obstruction is marked, or the disease has spread to other organs. It is my belief that most cases of cancer of the colon can be diagnosed long before the classical signs and symptoms of the disease develop, and even if a definite diagnosis cannot be made, the presence of a cancerous growth can be suspected so strongly as to justify a timely exploratory operation. It is with the object of emphasizing the importance of an early diagnosis, and especially of some of the early symptoms, that I venture to make this short communication.

The development of cancer in the bowel is necessarily accompanied by tumour formation. In a spare individual, unless the growth lies in the pelvic colon or in a non-ptosed splenic or hepatic flexure, it can be palpated long before any serious narrowing of the bowel has taken place. Indeed, I have several times discovered such a growth during a routine examination of a patient's abdomen before any symptoms referable to it were produced, one such case coming to me for an operation for inguinal hernia,

and another with uterine hæmorrhage due to myomata. The records of the uncomplicated cases in my series show that the growth in no less than 70 per cent. occurred in parts of the colon which were easily palpable, and that the diagnosis was based on the discovery of a tumour. Again, in those cases in which obstruction was present, the growth in more than 80 per cent. was situated in the pelvic colon, or in what might be called the "silent" area of the bowel in that a growth there is frequently not palpable either by abdominal or rectal examination. The obvious conclusion to draw from these two sets of figures is that when the growth is situated in a palpable part of the colon the diagnosis is generally made at an early stage, but when no tumour can be discovered the medical attendant is inclined to wait for developments.

Unfortunately, more than half the cases of cancer of the colon occur in the pelvic segment, and generally the growth in such cases is not palpable. The same observation applies to cancer occurring in a highly fixed splenic flexure, and, to a lesser extent, to those in the hepatic flexure; a growth in the latter situation can, as a rule, be palpated on deep inspiration. The number of cases, however, occurring at either flexure is small compared to those in the pelvic colon, so that it is to the early diagnosis of cancer of this part of the bowel that I wish to draw attention, and any remarks I have to make will apply with equal force to cancer of the recto-sigmoid.

I believe that the logical manner in which to approach the diagnosis of any disease is to study its pathology and symptoms and to co-relate the two. Following such a method, we find that the essential pathology of cancer of the colon might be epitomized into four stages—tumour, ulceration, stenosis, and dissemination. I think we might with advantage

study the clinical manifestations of the condition under these heads.

We have seen that in most cases in which the pelvic colon is affected the tumour cannot be palpated, and it is only in the later stages that the growth assumes such a size that the patient experiences a sensation of there being "something there," so that, as a rule, the patient's first complaint is due to the onset of ulceration. This soon follows the appearance of the cancer and is manifested by the passage of blood, mucus, and pus in the stools. In these early cases these abnormal constituents of the stools are small in amount (the pus particularly may be overlooked at a cursory examination, and may require a microscope for its detection); they are passed only as part of, and not independent of, a fæcal motion; they are constantly and persistently present although the quantity may vary from day to day, and their presence is not associated with any pain. Their appearance in the stools is positive evidence of ulceration, and the causes of ulceration are so few that their persistent passage in the manner just described is most strongly indicative of malignancy, and, to my mind, justifies an exploratory operation whether the two special means of examination presently to be mentioned are positive or not.

The onset of the third pathological stage—that of stenosis—is evidenced clinically by several signs and symptoms, on which I consider sufficient stress has not been laid. A patient whose bowels have previously been regular finds that instead of one good motion a day he passes two or three small ones, and, similarly, a patient who has formerly had recourse to regular aperients finds that the same dose, instead of giving one or two fairly large motions, now produces from four to six smaller ones. Associated with this disturbance of function there is also frequently a

feeling of dissatisfaction as if the bowel had not been properly emptied. I have found, if a patient has not noticed the passage of blood and mucus and his attention is first called to there being something wrong by the onset of this frequency of defecation and sensation of dissatisfaction, that where such symptoms are complained of an examination of the fæces will, in cancer of the colon, always disclose the presence of these products of ulceration in the motions. The syndrome comprised of the passage of blood, mucus, and pus with an increase in the number of daily evacuations, together with this feeling of dissatisfaction, is characteristic of early stricture of the bowel associated with ulceration, and the only common cause of this condition is cancer. As the *early* symptoms of cancer of the colon are the only ones under consideration in the present communication, the further development of the ulceration and stenosis, with their clinical manifestations, need not be dealt with, except that I would like to sound a note of warning against the diagnosis of "impaction of fæces." In my experience, this condition *per se* is extremely rare compared with cancer. The great majority of cases so diagnosed, and temporarily relieved by enemata, return sooner or later with marked obstruction necessitating colotomy and the discovery then of a malignant stricture.

I have in passing mentioned two special methods of examining the lower bowel; when they were introduced, surgeons hoped that, at last, an infallible means of diagnosis had been discovered, but the results have not justified our high hopes; I refer to the examination of the pelvic colon and rectum by the fluorescent screen after barium meals and enemata, and to the use of the sigmoidoscope. With reference to the former, I have come to the conclusion that in early cases no reliance can be placed

on the appearance seen after an opaque meal, and that but little information in such cases is to be obtained from a barium enema. To obtain any at all, I believe the surgeon should be present at the examination, and see for himself the opaque fluid running into the bowel. This method depends for its results on the obstruction having advanced to a considerable degree, but still not far enough to preclude the bowel above the stricture being completely emptied by preliminary purgatives and rectal injections.

In my opinion, a negative finding does not necessarily exclude a stricture, nor a positive infallibly prove one. By these remarks, I do not mean to convey that the aid of the Röntgenologist should not be called in, for, undoubtedly, a narrowing shown as constantly present in the column of the opaque material after a barium meal, and demonstrated in the same position by an opaque enema, is strong corroborative evidence of a growth already suspected from the symptoms, and such an X-ray finding immensely strengthens the surgeon's demand for an exploratory operation. The point I wish to make is, that a negative result of such an examination should not rule out an exploratory operation in a case in which the surgeon strongly suspects, from a study of the signs and symptoms, that a growth is present.

As regards the second aid to diagnosis — the sigmoidoscope—here we have an instrument which occasionally yields absolutely positive proof of the presence of a growth. Unfortunately, in many cases, I have found it impossible to pass the instrument round the angle between the rectum and the pelvic colon, and so gain precise knowledge of the state of affairs in the pelvic colon, but all growths in the recto-sigmoid and a proportion of those in the pelvic

colon proper can be demonstrated. Its use does not necessitate an anæsthetic; does not cause pain; is free of risk in careful hands, and frequently clinches the diagnosis, so that no examination can be considered complete without it.

In conclusion, I would like to give the notes of a recent case to bring out the points in diagnosis on which I wish to lay stress.

A gentleman aged 73, in excellent general condition, exceedingly young-looking for his age, came to me with the following story: He had been accustomed for years to take a small dose of salts before breakfast and for the past two months had noticed that instead of one good motion as a result, he had from two to four small ones, and even then his bowel would not feel empty. The motion was frequently accompanied by a little blood and slimy material. Examination of the abdomen and rectum, both digital and with the sigmoidoscope, revealed nothing abnormal. A barium meal and subsequently barium enemata were given, and no definite stricture was discovered. I told him that in spite of the negative examination I was convinced that he had cancer of the pelvic colon and advised an exploratory operation. This was refused, but two months later, on the persistence of the symptoms, he returned and the growth was discovered and successfully resected.

I would urge that cancer of the colon should be treated on the same lines as we treat acute appendicitis. Not so many years ago cases of this disease were carefully watched for the onset of so-called "indications for operation," whereas, nowadays, the only indication the surgeon requires is evidence of acute inflammation in the right iliac fossa. Similarly, I believe the persistence, without discoverable cause, of the symptoms just enumerated are sufficiently suspicious of cancer of the colon to justify an exploratory operation; very rarely, in my experience, has such an exploration resulted in a negative finding.

The Therapeutic Value of Hope.

By CHARLES W. CHAPMAN, M.D., M.R.C.P.

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Hope is a vigorous principle; it is furnished with light and heat to advise and execute; it sets the head and heart to work, and animates a man to do his utmost. . . . It puts a difficulty out of countenance, and makes a seeming impossibility give way.

HOPE is the greatest motive power in the world, it stimulates alike the scientific investigator and the man of business to persevere towards the attainment of their objects in spite of numerous disappointments. It was the inspiration of hope, coupled with confidence in the justice of the cause of freedom, which impelled Great Britain and France to face the mighty hosts of Germany, and stimulated the inventive skill and productive energy of those at home. Finally, we read in the Bible "We are saved through Hope."

Hope being recognized as a strong moral force alike in matters temporal and spiritual, it would be strange indeed if such a powerful incentive to action did not find its place in the practice of medicine. The object of this paper, which is specially addressed to the young practitioner, is to advocate a fuller application of this power for good.

We have all met the cheerful doctor, whose presence in the sick room always brings a ray of sunshine, who leaves his patient the better for his visit. We have also seen the gloomy doctor, who leaves his patient more depressed than he found him, who shuts his eyes to any ray of hope and, so confident is he of his prognosis, that the suggestion of "another

opinion" is barred as being utterly useless. Some, not being contented with a hopeless prognosis, will have the temerity to state the exact duration of the patient's life. Most of us have also had to do with patients who live on simply because they refuse to die, while others readily succumb because they decline to make any effort to get well. I have known despondent mothers, in the case of children who have long been ill, deprecate the adoption of further measures and beg that the child may be allowed to die in peace. I have in my mind the case of an infant sinking from the effect of protracted diarrhœa. It was with the greatest difficulty that I was able to inject a mixture of sulphate of copper, brandy, and arrow-root into the rectum. The remedy was successful and the mother's gratitude unbounded.

It is a good rule never to "give up" a patient, exceptions will occur no doubt in this as with most rules. To give up hope is to give up effort, and it is here the tragedy cames in.

I was much impressed by a case I saw, early in my career, of a man who had a big lump in the abdomen, apparently connected with the liver which, associated as it was with intense jaundice and emaciation, led to a diagnosis of cancer of the liver. The suggestion of a fæcal mass causing pressure on the gall bladder or duct was not favourably received, especially as the bowels had acted daily, besides which the patient and his friends had been told the case was hopeless. The suggestion was, however, acted upon, and laxative treatment, with the aid of enemata, brought the "cancer" to the bed pan, and the patient completely recovered.

Another case of a somewhat similar character may be given showing that regular action or even looseness of the bowels do not preclude the possibility of constipation.

A lady, 82 years of age, had diarrhœa so badly that a cloth had to be constantly worn. As the usual remedies failed, a consultation was held. As the motions were mixed with mucus, it was suggested that possibly there was a hard mass over which the fluid motion had been passing, and, as the rectum had not been explored, an examination was made and a large mass found, which was removed with the handle of a spoon. The

patient recovered and lived for some years.

Both these cases had been considered hopeless and further efforts abandoned.

Cases illustrating the value of a "never give up hope" attitude crowd on the memory.

A patient with heart failure, in whom treatment generally beneficial in such cases, had been followed by intractable vomiting, which threatened to bring on fatal exhaustion unless speedily relieved. Numerous remedies had been tried but the stomach rejected them. It was considered that the only hope laid in checking, if possible, the afferent impulses passing from the irritated stomach, and small doses of cocaine to numb the nerve terminals was suggested—a course which, in spite of the critical state of the heart was adopted in conjunction with small enemata containing brandy; the vomiting ceased, and the patient rallied.

Of course the most sanguine and persevering must expect failure at times, but he will have the satisfaction of having had a good try.

The value of suggestion consists largely in the hope of recovery inspired by the suggester.

A man, 38 years of age, was under my care in the hospital, he had been sent on account of angina pectoris, attacks of which were provoked by excitement or getting out of bed. The man was neurotic, and had gone through severe strain. He was examined on numerous occasions, radiographed and electro-cardiographed, but nothing was revealed to account for the attacks. He did not improve. I resolved to try suggestion. I told the patient there was one more remedy he could take, which must be immediately followed by his walking up stairs, and that he might expect a cure to follow. After elaborate preparation, 20 drops of sterilized distilled water were injected into the arm, and the man told to walk upstairs to the roof-garden. No attack followed, and the man left the following week cured.

I have generally found that patients, who boast of their fortitude and ask to be "told the worst," are the least able to bear bad news. Recently, I saw a doctor in consultation, who had signs of early angina pectoris. Before leaving I inquired if he wished to know my opinion of his case. He replied, "Do your best and tell me nothing." I thought there was much wisdom in his answer.

We will now consider the value of hopefulness in influencing the attitude of relatives and nurses

toward the patient. A verdict of despair has a most depressing effect on those in attendance upon the patient, which is reflected on the sick man. To prepare the relatives for the worst, or, in common parlance, "let them down easy," is surely preferable to the brutal bluntness, of which one sometimes hears. (If there remains a shadow of a doubt about the hopeless character of a case, it is better to withhold a definite opinion until further examination has been made.) I was on a visit to a very capable doctor in the country, and accompanied him on his rounds. On one occasion, I inquired what opinion he had given in a new case we were discussing. His reply was that he had arrived at a time of life, when he need not give a definite diagnosis at the first visit. It is here the young practitioner is handicapped; still, if he takes the patient or the friends into his confidence, he will generally be able to postpone the giving of a definite opinion until he has had a further opportunity for examination.

A too ready "cock-suredness" in either direction is apt to land the doctor into difficulties by unexpected death of the patient, or by an equally unlooked for recovery. Here again insufficient examination is often at the bottom of the mistake. This was forcibly impressed on my mind many years ago, when I was asked by a friend to confirm the hopeless prognosis he had given in a case of "tubercular meningitis." The prominent symptom was delirium, and this was so severe that he failed to investigate further into the cause of the symptom, which really was pneumonia. In the end the child recovered. Now mistakes are common enough among most of us, but no pains should be spared in the endeavour to avoid them as much as possible. Lightning diagnoses are rarely to be trusted. There is much truth in the old saw "While there is life there is hope."

The Heart in Graves's Disease.

By J. STRICKLAND GOODALL, M.B., M.R.C.P., M.S.A., F.R.C.S., F.R.S.

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THE importance of an accurate knowledge of the heart in Graves's disease should be fully realized when one considers that (*a*) in every case of this complaint the heart is affected little or much; (*b*) in unrelieved Graves's disease the termination is death by cardiac failure; (*c*) the state of the cardio-vascular system should determine not only the possibility or otherwise of any operative procedure on the gland (thyroid), but the nature and extent of such an operation.

The extent to which the heart becomes involved varies considerably; in early mild cases there is a simple physiological tachycardia (100–120) associated with a mild degree of myocardial exhaustion and atonia; in severe, long-standing, or very often acute cases the cardiac involvement may be very considerable, the tachycardia being extreme (180–200), myocardial exhaustion pronounced, while atonia gives way to actual dilatation, one or more valves becoming incompetent. Or again, the myocardium may have become definitely damaged, the damage being made manifest by such phenomena as complete irregularity of the pulse, indicating auricular fibrillation, or marked prolongation of the P.R. interval (indicating impaired conductivity of the Bundle of His) as shown by

electrographic examination.

The actual extent of the cardiovascular involvement appears to depend on three main factors, viz., (*a*) the duration of the disease; (*b*) the intensity of the intoxication; (*c*) the pre-existing state of the heart.

(a) *The duration of the disease.*—There can be no reasonable doubt but that, other factors being equal, the longer the duration of the disease, the more extensive and permanent the cardiac involvement. In a later stage, in this communication, the author hopes to trace the "life" or rather "death" history of the "Graves" heart.

The progressive involvement is well shown by the history of "medically" treated cases.

(b) *The intensity of the intoxication.*—This appears to vary with 1, the type of the disease; 2, the duration of the disease; 3, the mode of onset.

1. It seems highly probable the toxicity in any case varies from time to time in any and all forms of the disease. In *formes frustes* the intoxication is, as a rule, less than in ordinary forms, while in hyperplastic forms the toxicity reaches its maximum.

2. As regards the duration of the disease, it appears that, typically, the intoxication increases up to the end of the second year, and then gradually tends to subside. A slight intoxication lasting over some years appears to produce more permanent damage to the cardiovascular system than a high degree of intoxication lasting only a short time.

3. While as regards the mode of onset, some of the most toxic cases seem to be those having an acute onset, due to some violent emotion, *e.g.*, fright, especially following on the top of some infective condition such as typhoid or influenza.

Plummer regards the height of the systolic pressure as an indication of the degree of toxicity. As regards the blood-pressure in Graves's disturbances, many

different statements are made, but according to the author's experience the following are the facts :—

1. The systolic blood-pressure in the ordinary typical case is low, about 10 to 20 per cent. below the physiological blood-pressure of the individual.

2. The diastolic pressure is approximately normal.

3. Pulse-pressure low.

4. After operations on the thyroid, the blood-pressure tends to rise. The rise may be only a few mms. of Hg, or may even equal the original BP, in which case the blood-pressure becomes doubled after the operation, and the heart is subjected to a very severe strain. The rise appears to be more or less related to the severity of the operation, *e.g.*, being more pronounced after removal of part of the gland than after ligation of an artery, and if at all decided is often associated with irregularity of the heart's action due to auricular fibrillation; this, however, is usually only temporary, lasting from a few hours to a few days. This rise is possibly due to over-action of the supra-renals, and is in all probability the cause of the sudden deaths reported after operation on the thyroid, the actual cause of death being ventricular fibrillation.

5. Evidence is accumulating which suggests that the blood-pressure in Graves's passes through three stages :—

(a) *The stage of Primary Hyper-tension.*—This is short, associated with the onset of the disease; is probably due to direct action of the exciting stimulus on the supra-renals, and is most pronounced in cases which come on after definite shock, acute anxiety or fright, and is due to vaso-constriction.

(b) *The stage of Hypo-tension.*—In this stage the blood-pressure is about 10 to 20 per cent. below the physiological blood-pressure, and is due to peripheral dilatation, produced by a depressor substance secreted by the gland, and which has now

been isolated. It is during this stage that patients most often seek advice—it may be regarded as the "safe operation stage." The heart becomes soft and atonic, and finally dilated, with the valves more or less incompetent.

(c) *The stage of Secondary Raised Tension.*—This is a period of gradually rising pressure which succeeds (b) after a varying length of time (usually some years), and appears to be associated with two conditions: (i) A reduction of thyroid super-activity with an increase in supra-renal activity. (ii) Some secondary change in the cardio-vascular system such as cardiac hypertrophy.

From the above it seems clear that the cases most suitable for operation are those in which the blood-pressure is low, and a low blood-pressure has always been *one* of the guides taken by the author in advising operative treatment for Graves's disease. In the present writer's view a low blood-pressure indicates—

(1) Comparatively little myocardial exhaustion.

(2) A slight post-operative rise in blood-pressure, so little risk of post-operative ventricular fibrillation and sudden death.

(3) Little risk of hæmorrhage.

Kocher, on the other hand, regards a low blood-pressure as a source of danger, and states that "if we find the blood-pressure below normal and the disease highly developed, we must study the condition and especially note the action of the heart after exercise or excitement. Under these circumstances we might find a sudden, very marked dilatation of the heart, irregularity of the pulse and a blood-pressure which cannot be measured by our ordinary methods." He also states that a blood-pressure of 195 is not a contra-indication to operation. Without wishing in any way to criticize or under-rate the observations of

an authority such as Kocher, the writer would point out that in his experience the above phenomena would be much more likely to occur in cases of high blood-pressure than in low, and that blood-pressures of 195 and 187 are in his experience very rare in Graves's, but comparatively common in cases of cystic adenoma of the thyroid in old men. In any case a blood-pressure of 195 should certainly add to the risk of hæmorrhage.

In the great majority of cases, palpitation is the first symptom of Graves's disease. At first the attacks are usually intermittent, but very soon become continuous. If intermittent the attack starts more or less gradually and rapidly works up to a maximum at which it continues for some time and then more or less gradually subsides, only to be started once again by the least exertion or excitement. In a great number of cases, however, the tachycardia, once started, persists, the pulse being continually raised to 120–180 per min. The condition is, perhaps, best studied electrocardiographically, the main features of the curve being*

(*a*) A very short rest time or general diastole T.P.

(*b*) Large P. waves (indicating forcible auricular activity), equalling in amplitude the T. waves (Fig 1).

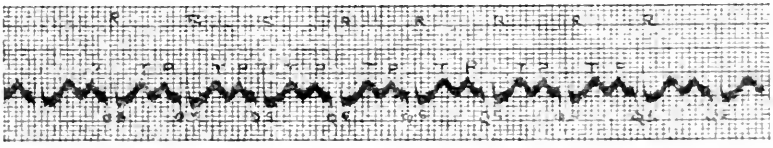

Fig. 1.

Should the tachycardia be of a very violent type, 180–200 per min., *the P. and T. waves become partially or entirely superimposed* (Fig. 2), which means that the

* P = Auricular complex. QRST = Ventricular complex.
PR = Conductivity of Bundle of His. TP = General diastole.

auricles commence contracting before the ventricles have relaxed, and in these cases, obviously, *the mechanism of the opening of the auriculo-ventricula*

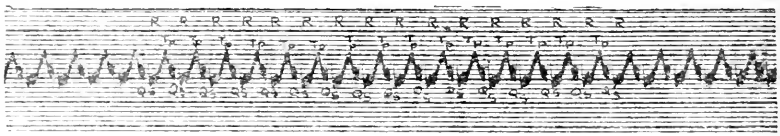

Fig. 2.

valves must be quite different to the normal. In all cases of Graves's the tachycardia is supra-ventricular, *i.e.*, auricular in origin.

As the result of the continuous over-action of the heart, *myocardial exhaustion* ensues, and is associated with loss of tone, followed by actual dilatation. *In the stage of atonia* the heart "spreads" slightly, the transverse cardiac dulness increases, the apex-beat moves outwards, while X-ray examination shows a rather large, somewhat horizontal heart. Murmurs are now common over the different orifices, the most common being one at the apex or pulmonary base, the former being often brought out by exercise or change in position. At about the same time a superficial pericardial rub is often heard; this is most common over the pulmonary base, and is often associated with a definite cardiac oppression or even actual pain. It is probably produced mechanically, and is possibly the basis of those attacks of pain said to occur occasionally in Graves's, and regarded by some as anginal in character. True anginal attacks in Graves's must be very rare, for in 20 years the writer has not seen a single case that could ever be regarded as of such a nature. *Atonia* passes on to actual dilatation, one or more of the valves becoming continuously incompetent; usually the mitral is the first valve to be affected, but not infrequently the tricuspid is the first to give out. In no case has the aorta been the

first to be involved, unless it had previously been damaged by some pre-existing disease, or unless the pericardium had been extremely involved. The common basal murmurs so often heard in Graves's are, in the writer's opinion, often exocardial in origin. Electrocardiographic examination now usually shows signs of myocardial change. Often there is a decided left-sided preponderance, indicating excessive action of the left ventricle (Fig 3). Very occasionally there is a right-sided preponderance; this, however, is distinctly

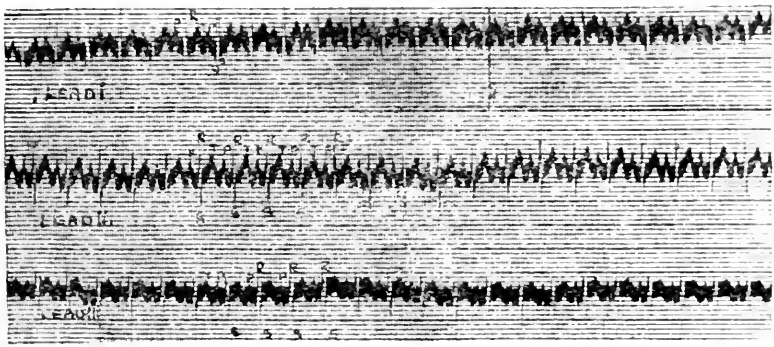

Fig. 3.

rare. The conductivity of the Bundle of His is now often found to be impaired, *the P.R. interval exceeding* $\frac{1}{5}$ *second and frequently exceeding the rest time* (*T.P. interval*) *of the heart* (Fig. 4).

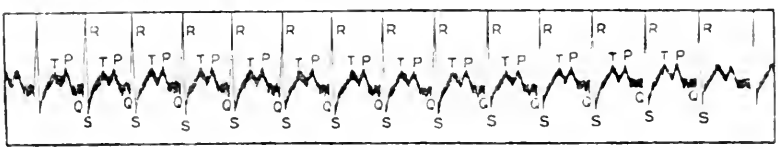

Fig. 4.

Finally the unrelieved Graves's heart becomes irregular, the beats varying both in rate and amplitude owing to auricular fibrillation, definite cardiac failure now having set in (Fig. 5).

The onset of auricular fibrillation in Graves's disease varies, but usually takes some years to develop. On

the other hand it may occasionally begin spontaneously with the disease; such cases are usually very severe. When once established it generally persists, but it has been known to disappear after early operation.

An irregular heart in Graves's is practically always due to auricular fibrillation. Hirchfelder states that the irregularity is probably due to extra systoles, though accurate analyses are wanting! The above records taken over many years should be fairly convincing.

Fig. 5.

To summarize, therefore, the changes the heart undergoes in Graves's disease—

(a) *Tachycardia.*—120 to 200 per minute leading to

(b) *Myocardial exhaustion*—associated with

(c) *Atonia*—with relative valve incompetence.

(d) *Dilatation*—Cardiac dullness increased. Apex-beat outside nipple line. Epigastric pulsation. Pericardial basal rub. ? Pain. Continuous valve incompetence.

(e) *Myocardial degeneration*—long-standing cases chiefly. Impaired conductivity. (Figs. 3 and 4.)

(f) *Auricular fibrillation*—Cardiac failure. Death. (Fig. 5.)

Turning now to the treatment of Graves's disease, assuming that the cause is too much thyroid secretion in the blood, it follows that rational treatment must be directed towards either (i) reducing thyroid activity, or (ii) neutralizing the secretion or its effects. It may be said at once that any efforts in the latter direction by means of sera, the milk of thyroidectomized goats,

etc., have proved useless, so we are compelled to try to reduce the thyroid activity. Medical remedies are unavailing, and the only means which appear to be reasonably reliable are (1) X-rays, (2) surgical removal of gland substance.

As regards X-ray treatment, this is useful in either early cases or in very serious cases of the disease when, owing to the advanced state of visceral degeneration, an operation would be attended with too great a risk. Its action, however, is uncertain, for (i) it appears difficult to assess accurately the dosage required in any given case; and (ii) the action continues after the treatment has been stopped, so that myxœdema has been known to follow. While (iii) there is the risk of burns, and should surgical operation subsequently become necessary it is rendered more difficult.

The Mayo Brothers *decline* to operate on patients in whom the pulse is above 130, in whom the heart is dilated over 1 inch, and in whom there is much visceral degeneration, emaciation, etc., and treat all such cases by X-rays.

In the present state of our knowledge, surgical treatment appears to offer the best chance of success, for by its means we are able to reduce down the gland volume in proportion to the severity of the case. Surgical treatment consists essentially in removing part of the enlarged gland, the amount removed in any case depending upon the severity of the symptoms and essentially upon the degree of tachycardia present. Usually $\frac{1}{2}$ to $\frac{2}{3}$ of the gland substance has to be removed. If the case is *not* very severe, *i.e.*, the tachycardia not above 130, heart not excessively dilated, myocardium not degenerated and the blood-pressure relatively low, the requisite amount of gland can be removed at once. If, on the other hand, there is considerable

tachycardia, 160 or over, heart excessively dilated, with incompetent valves, œdema, etc., together with some signs of myocardial degeneration and a relatively high blood-pressure, it is safer to do a preliminary operation (ligation) to reduce the activity of the gland and follow this up a week or so later by a second operation (ligation). If necessary, $\frac{1}{2}$ or $\frac{2}{3}$ of the gland can subsequently be removed with comparatively little risk.

If the case is really a serious one, even ligation of one thyroid artery is associated with a considerable amount of circulatory disturbance. The heart becomes rapid and often irregular (auricular fibrillation) and the blood-pressure goes up to a greater or lesser degree. The fibrillation usually lasts three to four days. After a second ligation similar phenomena are liable to occur, but are usually not so severe and do not last so long, generally 24 to 48 hours. The actual operation itself subsequently is attended with comparatively little circulatory embarrassment. The effect of the operation on the cardiac condition is often little short of marvellous —the tachycardia is rapidly reduced, the rest-time increased and with it the dilatation of the heart also rapidly becomes reduced. The valves become competent, so that the murmurs disappear and the apex-beat comes in towards the nipple line.

FIG. 6.—BEFORE OPERATION.

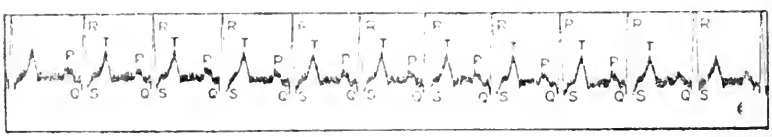

FIG. 7.—AFTER OPERATION.

Eczema or Seborrhœic Dermatitis in Children.

By FREDERICK GARDINER, M.D., B.Sc., F.R.C.S., etc.
Physician, Diseases of Skin, Royal Infirmary, Edinburgh; Lecturer on Diseases of the Skin, Edinburgh University etc.

IN these days of Child-welfare and Child-welfare Centres, the importance of this condition should be recognized, for early diagnosis and treatment are of paramount importance.

Those of us who have had experience in hospital know the type of hopeless recurrent seborrhœic dermatitis of childhood, which frequently comes under observation. On the other hand, many babies are brought to hospital in the early months of life with the condition in its incipient stage, a stage at which cure can readily be obtained. The first phase of the condition is a slight scaling on the scalp or the cheeks of the infant, which readily becomes thickened and reddened; still later, the diseased epithelium exfoliates, and moist exuding areas are left.

The two sites mentioned are at first alone involved, but where treatment is not carried out the eruption, in many cases, rapidly spreads all over the face and scalp, being specially severe behind the ears, and then may extend down the neck to the upper part of the trunk. The accompanying itch and resultant scratching are followed by infection of the hands. In instances in which it spreads still further, the lesions will be noticed most commonly in the severest form about the axillæ, umbilicus, and groins. On the trunk the eruption at first is generally more papular, but eventually may, like the face and scalp, show a

decided exfoliation.

In chronic cases, the persistent scratching is followed by septic lesions, but much more serious is the chronic thickening which is produced. This thickening is due to infiltration of the tissues and a commencing fibrosis which makes the integument dry and leathery-like. Eventually, the fibrosis may advance and lichenification follow, especially upon the flexors. The fibrosis, while it is, in great part at least, the result of scratching, increases the itch by pressure on the nerve endings.

Dr. Haviland Hall, some years ago in the *British Journal of Dermatology*, gave a statistical survey of these cases from the point of view of ætiology. He eliminated all the causes often ascribed—such as the baby being brought up on the bottle instead of being nursed by the mother, teething, vaccination, etc.—and defined the disease aptly as the "Occupation Dermatitis of Infancy."

In these strenuous times, it is hard enough to be a healthy adult, but his conclusions prove that the infant's skin also has to fight for health. For nine months a child has been developing in a soft bed of liquor amnii where nourishment has been uniform and continuous, and, above all, where the temperature has been normal and there has been no external irritation; then the scene changes.

Let us consider the newly-born infant. The skin is in a state of rapid development, which applies more particularly to the specialized structures such as the glands and the hairs, and is, therefore, unstable. We are all, after the last five years, amateur tacticians, and understand the elementary fact that an army in motion will suffer more from attack by the enemy than an army fixed or entrenched. The infantile skin, therefore, while undergoing change is rudely exposed to variations in temperature, and is

covered with clothing which may be soft and warm, but is not always unirritating. Even the head, if uncovered, lies on a bed where the blankets are rough, the surrounding atmosphere is charged with dust, while, in some households, the child may be exposed to dirt in a grosser form. The mother or nurse, in her laudable ambition to ensure cleanliness, removes this dirt by means of a soap which is strongly alkaline—as most modern soaps are—and proceeds to dry the body with irritant towels.

After such a succession of abuses, it is not surprising that the skin of the poor infant fires up. That it does not do so in all cases is a testimonial to the vitality of the infant; just as some children apparently thrive on the heaviest food, while in others the digestion requires most delicate handling. Babies, like adults, have their weak spots. In those we are writing about the skin is faulty, while in others it may be the lungs or the digestive organs.

A careful consideration of the sites and the appearance of the eruption will reveal the fact that, primarily, there is an imperfect functioning of the sebaceous and sweat glands of the skin, which renders it more liable to irritation. If the sebum, the natural oil of the skin, is not of the proper consistence, it follows that the skin, like a badly oiled engine, is liable to break down. If there is excessive exudation of sweat, a sodden epidermis is produced which also is more vulnerable. Its occurrence, primarily, on the scalp and cheek, and, secondarily, on the flexors, is explained by the fact that the glands are larger or more numerous in these regions. There is possibly, at least in extensive cases, some other chemical change in the glandular excretion which may irritate the skin.

While this is true, the fact of general ill-health should not be ignored, for, quite apart from the lower-

ing of the vitality of the skin, any failure in other excretory organs will throw a greater strain on the eliminating function of the skin. For this reason many authorities, especially in America, recommend careful dieting; but while it is known that excess of sugars and starches and some fats is harmful, yet, in the present state of our scientific knowledge, no definite dietary can be laid down.

In some recent papers the question of acidosis has been brought forward, probably because it is so much in evidence in other branches of medicine at present. Undoubtedly, excess of sugars and starches will increase acidosis, and these writers base their observations on the test of the alkalinity of the urine. With this end in view they push alkalies, which they find can be borne to a very great degree, until the urine is rendered alkaline, and it is kept in this state. The prescription recommended is

℞ Potass. citratis - - - - ℥ss.
Sodii bicarb. - - - - ℥ i.
Calcii lactat.
Magnesii carb. - - - - āā gr. v.
Aq. chloroformi ad - - - ℥ i.

Sig. ℥ss. to ℥ii. t.i.d.

The writer has had many opportunities of trying this remedy, and in one or two senile, especially rheumatic, cases it has done exceedingly well, but in the type under discussion just now, namely, the child, the results have been absolutely nil. Experiments have been carried out in hospitals with every facility for frequently testing the urine, and even after a month of strong alkalinity, in cases which previously had an acid urine, no benefit ensued.

The writer is, therefore, more inclined to regard the disease as in great part a result of civilized life. The baby of the pre-historic parents enjoyed more sunshine, or at least light, got more fresh air, and

was not exposed to atmospheric fumes and dirt. Leading a life untrammelled with clothing, which prevents free movement of the limbs and skin (and there is no happier sight than that of a baby's enjoyment when devoid of clothing), there was no pressure or irritation, and the skin got an opportunity of growing normally.

If these facts are true, then the management of the baby will require more careful consideration. The writer has in previous articles inveighed against the use of soap, because, being alkaline, it softens the epithelium, and because the cheap fats now used in modern soaps are in themselves irritant. With a sponge-bath twice daily, there is no reason why soap should be used at all to the body and face of a baby. Even the hands will only require it in the later months of infantile life. The bath should be tepid, because too hot a bath will lower the tonicity of the blood-vessels, and the subsequent process of drying should be performed by a smooth towel. The dressing, especially the underclothing of a baby, is always a subject of astonishment to the male onlooker. Quite apart from the time taken up and the numerous turnings and twistings that a baby has to undergo, there are tight strings and bows to be fastened so that the said onlooker does not wonder at the universal dislike of the baby world to the proceedings. Absolutely smooth underclothing must therefore be employed, and there should be no pressure or tight bands anywhere. A careful arrangement of the bedding with extensive overlapping of the sheets should be carried out, so that any irritation from rubbing of the skin on blankets will be avoided.

The subject is full of possibilities, but too large to dilate on.

Fresh air, sunshine, and avoidance of too hot

atmospheres are common-sense points that need not be elucidated. In the working-class household, if the baby is not laid down in a dark bed, it is put in a cradle close to the fire and smothered with clothes, which, while in itself being an unhealthy arrangement, encourages excessive sweat on the forehead and face.

Local Treatment.—When the slightest scaling appears, the use of either the following ointment or paste is to be recommended, the choice depending on whether the skin is dry or moist:—

℞ Sulphur. precipitati.
Acidi salicylici - - - - āā grs. ii to v.
Pulv. amyli.
Zinci oxidi. - - - - aa ʒ ii.
Vaselini - - - - - ad ʒ i.

or

℞ Sulphur. precipitati.
Acidi salicylici - - - - aa grs. ii to v,
Vaselini - - - - - ad ʒ i.

These should be rubbed in twice or thrice daily and spread on soft cotton or linen and so kept applied to the affected parts during the night.

Generally when this is used there is little further trouble, and the signs rapidly disappear. If the condition is resistant, it may be necessary to increase the strength of the two active ingredients, but one should always remember that a baby's skin is very sensitive, and will not stand preparations which are too strong.

If the disease has reached the stage of moisture and swelling in addition to the scaling, it may be necessary at times to apply starch poultices to remove the crusting, and in any case, as the disease is now complicated with staphylococcal infection, the following paste should be first used:—

℞ Hydrarg. ammon. - - - gr. v.
Zinci oxidi
Pulv. amyli - - - - āā ʒ i.
Vaselini - - - - - ad ʒ i.

Very soon two or three grains of sulphur precipitatum may be added to this, and, finally, if all goes well, sulphur and salicylic paste or ointment may be used.

Where the skin is extensively affected, the boro-calamine lotion, either in water or with the basis of carron oil, can be advantageously employed.

This is a stage at which hospital treatment is called for because of the chronicity and difficulties of management.

While the object of this article in THE PRACTITIONER is prevention, yet the experience of the hospital physician may be valuable in these extensive cases. Itching is now a most troublesome feature, and while all means are used to allay this symptom, the child must be strapped down in bed with bandages round the wrists and ankles which, while not preventing movement, are sufficient to keep the child from doing harm to himself by scratching still more. Rest in bed is, of course, essential, not only on account of freedom from irritation of clothing and varying temperature, but because of the facility for applying remedies. It will be found advantageous, in the majority of cases, to apply ointments or lotions on linen or cotton so as to ensure complete and continuous contact with the disease. The private practitioner soon realizes the expense of ointments, and, where it is possible, lotions are to be preferred in extensive cases for reasons of economy. The keeping of the hair closely cropped in children past the infantile stage is necessary if the scalp is to be thoroughly treated. Baths should be given daily, either with sufficient permanganate of potash to make them a pale pink colour or with about half a pound of starch. Ointments are generally used for the hairy parts of the body, and pastes for the moist areas, which are usually the flexor aspects of

the joints. In these moist areas occasional painting —say twice a week—with a 15-grs. to the oz. of silver nitrate in water will be found to be a useful astringent which reduces the swelling and exudation. It will be understood, however, that neither this nor the ointments should be applied until the crusts have all been removed by starch poultices or olive oil soaks.

The ointments, pastes, and lotions are generally those mentioned above—the strength being made to vary with the stage of the disease. This point of the strength of the active ingredients is a very important one. For instance, a case is often seen to improve with a ½ per cent. of salicylic acid in paste, and become inflamed when this is increased to 1 per cent. Step by step is the rule of education for the child's diseased skin, as it is for its mental development.

If progress goes on, which it generally does, a stage is reached at which there is only a certain amount of redness, but also, on close examination, the skin will be found over these parts to be thickened. If treatment is stopped, then almost invariably the condition recurs at once. The wise plan, then, is to use crude liquid gas tar painted on with watchfulness about once a week, or slightly oftener if the skin stands it. This is certainly our best drug for promoting absorption of the thickened areas.

The Immediate Treatment of Venereal Disease.

By E. T. BURKE, D.S.O., M.B., late Lt.-Col. R.A.M.C., F.R.G.S.
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IT is unnecessary to occupy valuable space in THE PRACTITIONER in pointing out the importance of the reduction of the incidence of venereal disease. If the experience of the armies of each of the nations engaged in the great conflict which has just terminated has not been taken to heart, then indeed any attempt here to bring it home would merely be like a voice crying in the wilderness. It may be taken for granted, however, that the necessity for the prevention of venereal disease has been realized. It is to be hoped that the means about to be taken, unlike those hitherto in operation, will be based upon a wide and scientific foundation, and will be carried through with enthusiasm and determination.

There is still, however, a lack of appreciation of the great importance of the immediate treatment of these disorders as soon as they are diagnosed. One hears and reads a great deal regarding the necessity for, and the importance of, early diagnosis. In fact, much time and energy is concentrated upon this. A diagnosis having been arrived at, there the matter often ends for a time. In many quarters the idea seems fixed that diagnosis is an end in itself. It is, of course, nothing of the kind. Diagnosis is merely the prelude—the *sine qua non*—upon which correct

treatment depends. The only point of early diagnosis is the early institution of treatment.

By early treatment one does not mean that remedial measures shall be begun that day sometime. One means that treatment shall be instituted within five minutes of the diagnosis being made. Properly considered, diagnosis and treatment are one. The one should merge into the other without a break or hitch. Diagnosis is like switching on the ignition of a motor-car. It is the initial and necessary procedure for "getting a move on." As soon as that has been done satisfactorily, so soon should the gear of treatment be put in mesh. If a period of six hours elapses between the time of diagnosis and the commencement of treatment, then six hours of valuable time have been lost, and it may mean that the patient may be as many days more in hospital or absent from his duty. Every hour is of the very highest value in the early stages. The diagnosing of a primary chancre in the early morning, and the putting off of the administration of salvarsan till the evening can only be regarded as a serious breach of duty, whether it be in general practice or in the Services. It is seldom indeed that, in the Field, adequate treatment follows immediately upon the diagnosis.

Diagnosis in the Field is comparatively easy. To the tactful medical officer the history is always given truthfully, and the only difficulty may arise in a man presenting himself with a sore on the genitals which has appeared five days after connection. Although this is obviously of the nature of a soft chancre, yet the possibility of a mixed infection must not be forgotten. The likelihood of the treponema pallidum being implanted at the same time as the bacillus of Ducrey must ever be borne in mind. In any case, soft chancre would be diagnosed and the appropriate treatment would be commenced. The provision of a

microscope for each Field Ambulance has long been required, and were that done and were suitable staining reagents and dark ground illumination apparatus available, a full diagnosis would be possible. In a word, a discharge from the urethra is gonorrhœa—or, rather, urethritis. The treatment is the same in each case. A sore with an incubation period of five days is soft chancre. A sore which has appeared not less than 21 days after exposure to infection is syphilis. To hang up treatment, on the plea that such a diagnosis is not based upon laboratory tests or cultural characteristics, is productive of incalculable harm.

A regimental medical officer diagnoses a primary chancre in a man. He sends him off to a Field Ambulance. The Field Ambulance agrees with the diagnosis, but may institute no treatment for various reasons. In the first place, salvarsan and the means for its administration are not usually available. The exhibition of mercury may be withheld "so as not to obliterate the Wassermann reaction, and thus prevent a proper laboratory test being done at the base." Furthermore, it may be decreed that venereal cases are not to be treated in the Field, but are to be evacuated to special hospitals. This decree is based upon the assumption that it is impossible to give adequate treatment to venereal patients elsewhere.

Gonorrhœa is generally regarded as being of less importance than syphilis. Greater liberties are supposed to be able to be taken with it. The man who is sent from his battalion with an acute urethritis arrives in a Field Ambulance, where he is regarded as more than less of a nuisance. Few medical officers are very interested in, or enthusiastic for, the treatment of gonorrhœa. The idea that venereal cases must not be kept in the Field tends to introduce a slipshod element. An internal medicine may be given

and local treatment administered with a syringe. This policy degenerates into simply giving the man "something" until he can be evacuated to a base venereal hospital. This "something" usually consists of a mixture—nauseating and inelegant—containing copaiba, sandalwood oil, or cubebs. The effect of this is to have, so far as the disease is concerned, no action whatever; but which is very certain to cause at least a temporary wreckage of the digestive system of the patient. Lumbar pain, hæmaturia, albuminuria, and cutaneous eruptions are the common consequences of the ingestion of anti-blenorrhagics. They in no way exercise any direct effect on the disease, although they are often prescribed as if they had some specific virtue. They are eliminated in such small quantities in the urine, and this medium is in contact with the site of the disease for such a short time, that their value is absolutely negligible. They were never intended to do anything more than to render the urine bland, and that they only accomplish to a very trifling degree. The drinking of barley water or even pure water, and the abstinence from alcohol and from certain articles of diet, are much more powerful than, and possess none of the disadvantages of, the anti-blenorrhagics. These drugs are given in a rule-of-thumb and thoughtless fashion. The authority for their use has been copied from book to book, and they are even recommended in the writings of those who have never prescribed them. They have been erected into a fetish of specificity which has descended from one venereal treatise to another, just as some anatomical and physiological text-books still perpetuate the fable that periosteum forms bone.

The continuance of the habit of giving internal medicine as a cure for gonorrhœa is probably to be explained by its being another evidence of that un-

fortunate tendency in which some of the medical profession "kow-tow" to the public demand for a "bottle" for every ailment, real or imaginary. Unfortunately, by a process of self-suggestion, the practitioner often comes to believe that there is some virtue in his own receipt. So the prescribing of the balsams goes on, and too often to the neglect of other treatment. Such a line of conduct has for its sequel the appearance of that grisly train of symptoms referred to by Osler. Frequently in the Field, and also in the Consulting Room, this is the only thing that is done for the possessor of an acute urethritis.

The other treatment that is meted out to the wretched patient is given with a urethral syringe. The urethral syringe is the most dangerous and most abused instrument in the surgeon's armamentarium. The hypodermic of the morphomaniac and of the cocaine devotee is largely a journalistic bogey, and is of only slightly greater importance than the giant gooseberry or the sea-serpent. The urethral syringe has become a national danger. The preaching of such dogma as is exemplified in the following quotation from a well-known and otherwise admirable text-book on venereal diseases is responsible for this: "The chief advantage of the injection method lies in the fact that it can be carried out by the patient in his home." The authors point out that "the patient should be carefully instructed in the method of sterilizing and caring for his syringe and should then be given a practical lesson in its use, syringing his anterior urethra with normal saline solution till the surgeon is satisfied that he knows how the act should be performed." Thus is this dangerous instrument thrust into the meatus urinarius of the majority of gonorrhœa patients. Were it done by the surgeon himself as a routine it would be bad enough, but, when the manipulations are entrusted to

the patient it is disastrous. It is carrying optimism to an absurd degree to delude oneself into the belief that five minutes' talk can instil the principles and the importance of the asepsis of the urethral syringe into the patient's mind. The proper use of the syringe is not even an accomplishment of the average practitioner.

The principle of the whole procedure merits a little consideration. The urethra is a dilatable canal lined with a delicate mucous membrane in which are embedded numerous crypts and glands, the mouths of which are directed anteriorily. It is divided into two parts by the compressor urethræ muscle, which, when it is contracted, completely shuts off the posterior from the anterior portion. Gonorrhœa is always at first an anterior disease. The gonococci burrow into the mucous membrane and take up their residence in the crypts and glands. There they multiply and set up inflammation, with the formation of pus. The local administration of an antiseptic by means of a syringe has for its object the killing off of the infecting organisms and the dilatation of the urethra by the fluid so that it may gain access to every part of the canal. It is prevented from entering the posterior urethra by the contracted compressor urethræ muscle. On the withdrawal of the syringe, the organisms, living and dead, which have been displaced from the site of the disease, are washed out by the antiseptic fluid. That all seems very reasonable, but note must be taken of certain additional facts.

The gonococcus—or any other pathogenic micro-organism—before it can be infective, must, from its own point of view so to speak, be healthy. In other words, its virulence depends upon its own physical condition. The fitter it is, the greater is its pathogenicity. Once the gonococcus finds a lodgement, that implies that the body cells at that particular

place are not in such a fit physical condition as are those at a remote site. As the disease advances, the physical condition of the infecting cells becomes better, while there is a corresponding decrease in that of the surrounding cells of the mucous membrane. In other words, the surrounding cells are more liable to die, have less vitality, are more susceptible to noxious agents than are the healthy gonococci. They are more liable to be attacked by a cell-destroying medium such as an antiseptic than they would be if they were in their normal condition. The effect of an antiseptic, then, applied to the site of the lesion is to cause the death of the more devitalized surrounding mucous membrane cells before that of the more vital infecting gonococcal cells. This results in tissue destruction and in the formation of a further supply of devitalized material upon which the gonococci can flourish. In such fashion is a vicious circle established.

The direct application of antiseptics cannot kill organisms *in vivo* without at the same time damaging healthy body-cells and killing unhealthy ones. The principle of attempting to burn out the gonococcus is therefore futile. Whether or not this burning out is intended by the surgeon, it very often becomes the aim of the patient who manipulates his own syringe.

It is a most difficult thing to regulate the pressure of the syringe so that the resistance of the compressor urethræ is not overcome. The effect of a jet of fluid projected against this muscle is, in the first instance, to stimulate it to contract. This stimulation soon induces fatigue, and the muscle relaxes. This relaxation may be only momentary. The presence of a flow of fluid in the anterior urethra, particularly if it is slightly irritating, as all antiseptics are, is to compel the patient to the act of micturition, and that means the relaxation of the compressor. The effect of relaxation, whether it be momentarily or for an appreciable

time, whether it be voluntary or involuntary, is to throw open the portal guarding the posterior urethra and to allow the backward extension of some infective material which is usually small in amount. As the ordinary procedure is for the patient to empty his bladder before syringing, should a small quantity of infective material be washed backwards and be imprisoned behind the compressor, there it will remain until such time as there is sufficient urine in the bladder to impel the patient to micturate and thus wash it out. It is during this time that the gonococci may find a lodgement in the posterior urethra and set up inflammation there. This is the secret of the occurrence of cystitis, prostatitis, vesiculitis, and epididymitis. Moreover, the liability of the compressor to be overcome prevents adequate dilatation of the anterior portion of the urethra. The hands of the amateur—the patient—are incapable of gauging the pressure required. The usual results of injection treatment by the patient himself are that in his anxiety to get well, the solutions are used too strong and too often; there occurs death of the surrounding cells of the mucous membrane, loss of tissue, and, when repair does take place, cicatricial contraction and stricture. Backward extension is practically inevitable, and the usual complications follow. The retention of injection treatment by the surgeon is evidence that the anatomical, pathological, and dynamic conditions obtaining in the urethra are not grasped.

The foregoing describes the treatment ordinarily accorded to the gonorrhœal patient in the Field, and also to the private patient at the hands of the general practitioner. By the time a venereal hospital is reached, not only has no good been done, but often much harm.

The high figure of the wastage of man-power from

venereal disease during the war is indicative of at least three things :—

(1) The preventive measures taken were inadequate.

(2) Early diagnosis and treatment were not generally adopted.

(3) The treatment as a general rule was not thorough and efficient.

It has been asserted that adequate treatment is not possible in the Field. Too frequently has that been taken as a justification for giving no treatment at all, or for administering the balsam and syringe combination. The fact is that efficient and modern treatment can and has been done in the Field. It can be carried out in Field Ambulances, provided that officers are well trained and that they are given proper equipment. The following scheme is suggested as being both efficient and economical. I have personally tested the methods hereunder advocated during four years of active service in the Field, and have found them satisfactory in every respect.

SCHEME AND EQUIPMENT.

Each Field Ambulance will number among its personnel at least one medical officer and six men well-trained in venereal work. This staff will belong to the headquarters Tent Subdivision, *i.e.*, "A" Section. The equipment for venereal work in the Field will be of two kinds—

(1) For diagnosis.

(2) For treatment.

Diagnostic equipment will consist of—

(1) Microscope in case, complete with set of lenses, one of which must be 1/12 oil immersion.

(2) A substage condenser for dark ground

illumination.
(3) Cedar oil.
(3) Six dozen glass slides.
(5) Bottle of Indian ink.
(6) Small centrifuge.
(7) Methylene blue stain.
(8) Six clear glass jars (six ounce).
(9) Six capillary pipettes.

In the field the diagnosis is usually quite simple and straightforward. The history given is, as a rule, sufficient, and the cases present themselves early, before the appearance of complications. The principle upon which to go is that any discharge from the urethra is gonorrhœa; any sore on the genitals may be either syphilis or chancroid or both. The incubation period is usually sufficient to indicate with which of the two we have to deal. However, with a complete diagnostic outfit such as is given above, a proper examination must be made at once.

DARK GROUND ILLUMINATION METHOD.

If the patient has a sore on the genitals, the part is washed with normal salt solution. The sore is squeezed gently so that some serum exudes. This is collected in a capillary pipette and transferred to a slide. Every attempt should be made to avoid contamination with blood, as that interferes considerably with the microscopic examination. The ideal is to obtain serum alone. Dark ground illumination is the best and quickest method of demonstrating the treponema pallidum. This is done by the substage condenser acting in such a way that the rays of light fall obliquely on the objects which are in the drop of serum on the slide. If there are treponemes in the serum, they will appear as white spirals on a black background. The luminant may be sunlight or the light from an acetylene operating lamp,

of which there are three in a Field Ambulance equipment.

INDIAN INK METHOD.

To the serum on the slide is added a drop of Indian ink which has been centrifuged. The two are then spread on the slide in the same manner as in the preparation of a blood film. The specimen is examined with the oil immersion lens. The ink does not stain the treponemes and therefore they appear white on a black granular ground.

EXAMINATION FOR GONOCOCCI.

Cleanse the glans and meatus with salt solution. Insert a sterile probe into the meatus and take up on it some of the discharge, which is then transferred to a slide. This is then stained in the usual way with methylene blue and examined with the oil immersion lens. The six glass jars are used for the collection and examination of urine.

TREATMENT EQUIPMENT.

Syphilis.—

(1) Lambkin's cream.
(2) Ung. hydrarg.
(3) Pil. hydrarg. cum cret. gr. 1.
(4) Six pairs rubber gloves.
(5) Three all-glass syringes.
(6) Six platinum needles, 2 ins. long and 20 calibre.
(7) Salvarsan, galyl, intramine, etc.

The administration of mercury calls for no description. Where distilled water is available—and a small still might easily be incorporated in the equipment—salvarsan or some similar drug may be given. The apparatus as shown in Fig. 1 has been found to work admirably. A and B are glass reservoirs from a Rodger's cholera outfit. One contains the solution

of salvarsan and the other the saline solution. From A and B lead rubber tubes to the Y-piece C, which is culled from a Potain's aspirator. On the arm connected with A is a stopcock. D is a clip fixed on the tube from B. E is a long rubber tube from the Y-piece, which has on its length a vulcanite stopcock E, obtained from an ordinary Field Ambulance irrigator. Between this and the needle H is inserted in the tube a glass window G. A special needle was eventually obtained which had a small stopcock on it where it joined the rubber tube. This was found to be more satisfactory. The method of administration by this type of apparatus is too well known to require description. A much more handy and portable instrument is that made by the "Intravenous Apparatus Co." of Baltimore, U.S.A. This is used extensively in the United States, and it is in every way admirable. It was first described by Abramovitz in the *Journal of the American Medical Association* of March 15th, 1913. This apparatus, or something similar, would be a useful adjunct to the venereal equipment of a Field Ambulance. In the absence of distilled water the administration of galyl or intramine intramuscularly is indicated. The administration of Novarseno-Benzol intravenously by means of a 10 cc. Record syringe as recommended by H. Wansy Bayly is even more simple and is equally satisfactory.

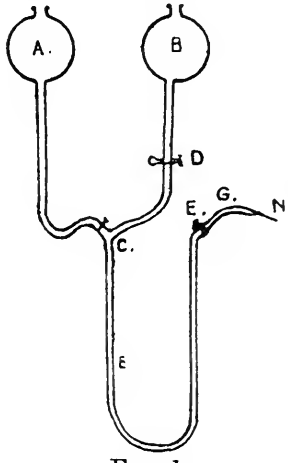


FIG. 1.

By means of such an equipment the full and most modern treatment of syphilis can be commenced in the Field immediately the diagnosis has been made. The patient is rapidly rendered non-infective, is able to return to duty in a very short time, and only

requires to be seen at intervals in the Field Ambulance for his injections.

Gonorrhœa.—For the treatment of this disease all that is required is some form of irrigation instrument. A urethral syringe is no part of the venereal equipment. With a syringe, irrigation is impossible. Fig. 2 shows a satisfactory irrigator. A represents a 20-ounce reservoir from a Rodger's cholera outfit. B is a rubber tube 8 ft. long, ending in a vulcanite nozzle E. The nozzle is provided with a stopcock C, which is actuated by the thumb of the surgeon. D is an enamelled iron filter-funnel through the stem of which the nozzle passes. The object of this is to catch any backflow from the urethra and prevent the splashing of the operator. When C is pushed forward, the tube is opened and allows the fluid to pass. When it is back the flow ceases.

The principle of irrigation—Janet's *grand lavage*—is worthy of explanation. The patient first of all empties his bladder and thus washes out both his anterior and posterior urethra. The external meatus is then cleaned with a solution of potassium permanganate. The reservoir is filled with a solution of permanganate. Watson of Glasgow has lately obtained better and more striking results with solutions of acriflavine and proflavine. If permanganate is used, the strength is 1 to 5,000 at a temperature of 120° F. The patient may be either sitting in a chair or lying down. With the reservoir 3 ft. above the patient's pelvis the nozzle is inserted into the meatus and the stopcock opened. The pressure at this height is not usually sufficient to overcome the compressor muscle. By this means the anterior urethra is washed out and to a certain extent dilated. The

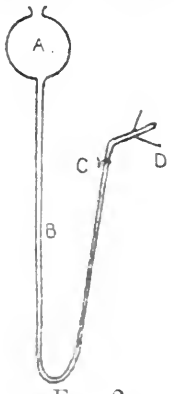


FIG. 2.

whole reservoir full is used in this anterior washing. After the reservoir is refilled it should be raised to 6 ft. above the pelvis of the patient. The object now is to fill the bladder, to secure wide dilatation of the urethra, and to ensure that any infective material that may have passed the compressor will be rendered harmless. No matter what experience one may have, or how careful one may be, there is always the chance of some infective matter having got into the posterior urethra. The filling of the bladder ensures that such material will be overwhelmed with an antiseptic deluge and will not be allowed to remain behind the compressor, but will be washed out. In this way alone can one ensure safety. The previous thorough irrigation of the anterior urethra makes it tolerably certain that it is clean before the posterior irrigation is commenced. Any gonococcal material washed back during either irrigation will have no opportunity of doing harm.

In certain patients there is a difficulty in overcoming the resistance of the compressor. This can usually be surmounted by getting the patient to breathe deeply, by engaging him in conversation so as to distract his attention, or by directing him to endeavour to pass water. This generally succeeds in causing the compressor to relax. After a little practice one can "feel" the compressor from the resistance to the fluid. It may be necessary to "dodge" this muscle by directing a series of jets of fluid against it. This induces fatigue and momentary relaxation, and when this is felt to happen, the fluid must be allowed to run in steadily. The pressure of the fluid maintains the relaxed condition of the muscle. After the bladder is full, the patient passes out the solution. The posterior irrigation should be continued until the permanganate solution returns the same colour as when it went in.

This treatment should be carried out twice daily. The strength of the solution should be gradually increased until it is used in a proportion of 1 to 500 for anterior and 1 to 800 for posterior irrigation. The routine is ten days' treatment.

As regards internal treatment, what is aimed at is to keep the urethra clean with a flow of bland, non-acid urine. Fruit, meat, alcohol, vegetables, highly seasoned food, cheese, etc., should be used as little as possible. A diet consisting of milk, porridge, bread, fish, puddings, and as much water as the patient can drink should be given. Three or four quarts of this most excellent diuretic should be consumed daily. Tea may be taken in moderate quantities. An alkaline diuretic is useful.

Chancroid.—The treatment of this should be vigorous. The complete destruction of the ulcer should be done immediately. This is the only way in which to obtain a healthy granulating surface. After this has been accomplished, the only other requirement is scrupulous cleanliness. The ulcer may be destroyed by nitric or carbolic acid, but by far the most satisfactory method is by the actual cautery. The lesion and its surroundings should be made thoroughly clean and then rendered anæsthetic by the injection of a half per cent. solution of novocain. The white hot iron must be carried into every recess of the ulcer and into the surrounding tissues. Success can only follow complete destruction. After cauterizing, the part should be sprayed with hydrogen peroxide and then dressed with iodoform. The eschar comes away in a few days and leaves a raw, healthy surface.

The above methods for the treatment of venereal diseases in the Field would, it is believed, result in a great saving to the State, of time, money, and man power; and, in addition, would be to the great advantage of the patient.

On Syringing Ears.

By T. STACEY WILSON, M.D., F.R.C.P.
Consulting Physician, General Hospital, Birmingham, etc.

ONE most important point, which is not touched upon by Mr. Layton in his article in the April number of THE PRACTITIONER, is that hard wax is quite insoluble in warm water, and cannot as a rule be broken up by syringing with water unless a dangerous amount of force is used. There is, however, between the wax and the living tissue of the wall a layer of desquamated epidermis. The object to be attained by syringing is to wash away this epidermis at one point until a small hole is made which allows the water to get through into the space behind the plug of wax. The principle of the Brahma press then comes into play, and the plug of wax is forced out by the pressure of the water behind it. The stream of water, therefore, must always be directed upon the *same* spot on the wall of the meatus, and the most convenient spot is the upper part of the posterior wall.

With this method of syringing it is usually possible to remove any plug of wax with five minutes' syringing or less. The syringe used must have a thin long nozzle and a small aperture. It is, however, far better to soften the wax by means of a solution of washing soda in equal parts of glycerine and water, say, 15 grains of sodii carb. with half an ounce each of glycerine and water. If 10 drops of this solution are put into the ear several times on the day before the ear is to be syringed, and the ear is kept plugged with a little cotton wool, the removal of the wax will be a very simple matter indeed.

Amputation of Middle and Ring Fingers by Transplantation of the Web.

By A. P. SHERWOOD, M.D.

Hon. Capt. R.A.M.C., Consulting Medical Officer, Princess Alice Memorial Hospital, Eastbourne.

AS surgeon to Kempston V.A.D. Hospital during the war I had opportunities for putting into practice an amputation of middle and ring fingers, which gives so satisfactory a result that I shall never use the "racquet bat" incision in any case in which there is a sound web on either side.

Having selected the web to be preserved, the incision is begun on that side of the doomed finger, just beyond the origin of the web, carried down to

the bone and obliquely along and across its metacarpal bone; on the opposite side, the incision is begun at a corresponding point on the adjacent uninjured finger, exposes the fibrous tissue, and is carried along the metacarpal interspace to meet the other incision. The palmar ends of the incisions should remove a V-shaped piece and some of the pulp. The finger with about two-thirds of its metacarpal bone is removed in the usual manner, and the web firmly sutured into its new insertion; the hand bound to a splint the width of the narrowed palm, and reaching to the heads of the metacarpal bones. The advantages of the operation are that the web is undamaged, and fixed with a wide fibrous attachment, as strong and perfect in appearance as an uninjured web.

Having myself lost a middle finger, I strongly advise that in making the palmar incisions, an appreciable amount of pulp with the nerve ends should be removed; a bulging pad containing the nerve ends acts as a medium through which any pressure will call up a stiff electrified ghost of the missing finger, the earlier appearances being so startlingly vivid that they can be appreciated only by those who have lost a member.

Practical Notes.

Treatment of Acute Bronchitis in Children.

Cumston recommends, in the mild forms, rest in bed, hot sweetened tisanes, and poultices containing a little mustard three or four times daily for a few minutes.

The following draught may be prescribed—

Euquinine - - - -	10 cg.
Syrup rub. idali - - -	30 cc.
Cognac - - - - -	10 cc.
Distilled water - - - -	60 cc.

A dessertspoonful to be given every hour.

When there is much mucus impeding respiration, syrup of ipecacuanha should be given, and ointment of menthol or of gomenol applied inside the nostrils. If the temperature rises to 102°·5 and there is dyspnœa, baths, 97°–99°, should be given every three hours. As long as the temperature is 102°·5, cold packs should be applied to the chest, the towels being wrung out in water at 68° and covered with waterproof, being changed every three hours.

Hot sweetened alcoholic drinks have a useful stimulating action. As much as 3 cc. of brandy may be given daily for each year of life.

The following prescriptions are commonly useful :—

Ammonium chloride, Sodium benzoate -	of each 30 cg.
Syrup of senega, Melissa water - -	of each 20 cc.
Distilled water - - - -	50 cc.

One dessertspoonful every hour.

Ammonium acetate - - -	10 g.
Sodium benzoate - - -	30 cg.
Syrup of senega - - -	30 cc.
Tilia water - - - -	60 cc.

To be taken in dessertspoonful doses through the day.

Terpine hydrate, Sodium benzoate -	of each 30 cg.
Cognac, Tilia water - -	of each 15 cc.

One dessertspoonful every hour.

In the severer forms, collargol or injections of colloidal silver

may be indicated.—(*New York Medical Journal*, March 20, 1920.)

Treatment of Whooping-Cough.

Miriel points out that there are two methods of treatment which are remarkably efficacious.

1. The anti-pertussis vaccine, of which an hypodermic injection is given every day or every other day, from six to eight doses being given. This has a remarkable effect in reducing both the number and the severity of the coughing fits.

2. Intra-muscular injections of ether, 1 cc. being given under one year and 2 cc. above that age. From four to six injections are given into the gluteal muscles every other day.

The injection of the vaccine is painless; that of ether is a little painful. Vaccine is suitable for all ages. Infants tolerate the ether injections very well, but older children dread the prick of the needle.

In very severe forms, Miriel recommends symptomatic treatment in addition by means of bromoform, which can be successfully masked in the following preparation—

Ammonium bromide - -	- 0·50 g.
Tincture of aconite - -	- 20 drops.
Cherry-laurel water - -	- 40 drops.
Solution of bromoform - -	- 10 g.
Syrup of codeia - -	- 25 g.
Syrup of lactuarium - -	- 75 g.
Syrup of poppies to - -	- 210 cc.

Six teaspoonfuls to be given in the 24 hours.

Whooping cough is not cured in a day or two by these methods; but the more severe cases are brought, in about 10 days, out of a grave disease into a mild complaint. In less severe cases, a cure can be effected in about a fortnight.—(*Gazette des Hôpitaux*, May 20, 1920.)

Treatment of Gouty Arthritis.

Petersen has obtained excellent results by giving a combination of potassium iodide and hexamine. The pains in the joints are increased at first, but have improved considerably after a week's treatment. After six or seven weeks pain has disappeared and the tophi have become reduced in size. The tolerance for iodine is determined by testing the urine for retention of that element.

Reviews of Books.

The Diagnosis of Nervous Diseases. By Sir James Purves Stewart, K.C.M.G., C.B., M.D., F.R.C.P. Fifth edition, revised and enlarged. Pp. 584. London: Edward Arnold. 30s. net.

The fifth edition of this well-known book has been revised, in part re-written, and a brief chapter on war neuroses added. The work has already established itself among the classics of neurology, and, as far as it relates to organic nervous diseases, a high measure of praise may be awarded for its lucidity and completeness and the excellence of the plates and diagrams. The author's treatment of the neuroses, however, will not be so universally acclaimed. Knowledge of functional nerve disorders has advanced very largely during recent years, but much of the new work has been ignored in this book. The classification of the neuroses into neurasthenia, psychasthenia and hysteria is not one which will be accepted by those most familiar with the conditions. Despite, however, its comparatively unsatisfactory treatment of the neuroses, this book is one which all who are interested in the study of nervous diseases should possess.

The Engines of the Human Body. By Arthur Keith, M.D., F.R.S., Conservator of Museum and Hunterian Professor, Royal College of Surgeons of England. Pp. xii + 284. London: Williams and Norgate. 12s. 6d.

This book contains the substance of Christmas Lectures given at the Royal Institution in 1916–17. We have perused it with much interest and profit. The author takes as his theme the mechanics of the body and shows how the various parts resemble machines. Thus the muscles are likened to internal combustion engines, the heart to a double pump, the lungs to bellows, the metabolic organs to workshops and laboratories, the brain and nervous system to a postal system and automatic telephone exchange. The points of resemblance and difference between the human and the mechanical machines are fully described, and are illustrated by numerous figures and diagrams. A good deal of historical matter is also introduced relating to the discoveries of Harvey, John Hunter, Charles Bell, and others. As a simple and popular, though at the same time scientific, exposition of the functions of the body for both lay and professional readers, we can heartily recommend this book.

Handbook of Physiology. By W. D. Halliburton, M.D., F.R.S. Professor of Physiology, King's College, London. Pp. xx + 936. Fifteenth edition. London: John Murray. 18s. net.

It is but a few months ago that the fourteenth edition of Halli-

burton's Physiology was reviewed in these pages—an eloquent testimony to the popularity of this excellent text-book. No fundamental alterations have been made, the changes being only those necessary to bring the book "up to date." The useful appendix on War Diet is still included. There is no need to say more than that the student and practitioner will find this book a reliable guide to modern physiology; it is clearly written and well illustrated and produced, and can be confidently recommended.

Home Exercises for Spinal Curvature. By RICHARD TIMBERG, Medical Officer, Physico-Therapeutic Department, St. Thomas's Hospital, etc. Second edition. Pp. 67. Illustrations, 32. London: William Heinemann. 6s. net.

THIS little book, which, we are glad to see, has passed into a second edition, emphasizes the value of special "Physical Exercises" as one of the means of treating lateral deviation of the spine, and of scoliosis. Once the point is established that in any given case, physico-therapeutics are to form part of the plan of treatment, this volume finds an immediate use; and we agree with the author that the general practitioner may safely place it in the hands of his patients.

The author has not deviated from his purpose by describing any rival methods such as Klapp's Crawling Exercises, Oldberg's Strap Exercises, and, fortunately, he has not diverged into the merits or otherwise of Abbot's Corrective Plastic Jackets. The book consists of five chapters: the normal spine; how spinal curvatures arise; the object of the exercises and what may be expected of them; a description of the various exercises; and, in the fifth chapter, exercises for flat feet are dealt with. A valuable appendix, and a good section of the book gives directions for "Home Exercises," under the heading of general utility, accuracy in performance, length of time, progressive order, exercises for kyphosis, exercises for lordosis; and, most useful of all, there are tables which give the descriptive number of those exercises which the author recommends for kyphosis and lordosis, with suggestions as to the daily complete programme. We note that, on p. 18, the author makes the distinction, and rightly so, between lateral deviation and scoliosis, when the element of rotation is added.

Whilst the book is strictly limited in scope, yet it fulfils a definite need. It is well and clearly written, and evidently it is the outcome of a long and varied experience in the treatment of one of the most perplexing of deformities.

Thoughts of a Psychiatrist on the War and After. By WILLIAM A. WHITE, M.D. Pp. 137. New York: Paul B. Hoeber, $1.75.

THIS book consists of discursive reflections upon social and individual psychology, repression, mental conflicts, psychological effects and psychological causes of war, and other subjects. To attempt to deal with so comprehensive a list within the limits of 137 pages may be courageous, but necessarily involves superficial

and incomplete treatment. We can find nothing in this volume which is not already dealt with more satisfactorily in the numerous writings of Ernest Jones, Trotter, and other psychologists. The book will be of small service to those already familiar with Modern psychological developmnets, and it is too sketchy to be of any value to junior students.

Dementia Præcox and Paraphreina. By Professor Emil Kraepelin. Translated by R. Mary Barclay, M.A., M.B. Edited by George M. Robertson, M.D., F.R.C.P. Pp. 331. Edinburgh : E. and S. Livingstone. 15s. net.

This account of dementia præcox is a translation of the section dealing with this disease in Kraepelin's book on psychiatry, and it therefore gives the views concerning this much debated disorder upon which Kraepelin has formulated his conclusions regarding the causation, symptoms, and clinical entity of the disease. While it is still considered doubtful if the varieties described can all be brought under a uniform heading it is claimed that experience has now shown that the disease tends to progress along definite lines which can be predicted with reasonable certainty in different cases and that the suggestion that the groups classified under the heading of dementia præcox consist of a collection of uncured psychoses of different kinds can no longer be upheld. If this view is accepted it follows that dementia præcox is one of the most common forms of insanity and that any knowledge likely to lead to its prevention or cure would be of the greatest possible service. At present there is no certainty as to its cause; auto-infection complexes and other possible causes have their different supporters, the various views concerning which are fully stated, and the book is one in which both an interesting and valuable account of the disease will be found.

An Index of Prognosis and End-Results of Treatment. By various writers. Edited by A. Rendle Short, M.D., B.S., B.Sc., F.R.C.S. Pp. xii + 770. Second edition, revised and enlarged. Bristol : John Wright and Sons, Ltd. 30s. net.

The early issue of a second edition of this work is ample proof of the favourable reception accorded to its first appearance. As would naturally be expected, much of the new material introduced deals with the conditions arising out of the great war, but many of the great problems involved must remain to be dealt with in future editions so far as end-results are concerned. Like the first edition, this second edition will always remain of value as a register of the progress made during these memorable years.

The Action of Muscles, including Muscle Rest and Muscle Re-education. By William Colin MacKenzie, M.D., F.R.C.S., F.R.S.E. Pp. xvi + 267, 99 illustrations. London : H. K. Lewis & Co., Ltd. 12s. 6d. net.

The author very rightly claims that the question of muscular function is of prime importance for the purposes of orthopædic

treatment, whether the injury has been in muscle, bone, joint, nerve, or central nervous system. To obtain the best results, it s essential that the surgeon should have a thorough knowledge of the function of muscle, and this must include not only the knowledge of the action of a muscle, but of that of its opponent as well. Dr. MacKenzie deals most ably in his book with the subject, both from the anatomist's point of view and from that of the surgeon, and is fortunately able to do so from practical experience in each capacity. More than ever is it abundantly manifest that the art of surgery, in its truest and only real sense, consists in the application and adaptation of a full scientific knowledge of anatomy to the operation and its intended purpose. Dr. MacKenzie's book is of first-rate importance.

The Religion of a Doctor. By T. Bodley Scott, M.R.C.S. Pp. 98. London: T. Fisher Unwin.

Thinking men of to-day require a wider interpretation of the Deity than they are able to obtain from mere ecclesiasticism, and Dr. Bodley Scott has done a service to the interests of true piety by writing this courageous and well-reasoned little book. It is not to be supposed that everyone will agree with him, but the most vigorous dissident will allow that the spirit in which the book has been written, the atmosphere which pervades it, no less than the learning and literature which it displays, constitute a worthy and attractive contribution to the elucidation of problems which from time to time press themselves upon all men.

A Public Medical Service. By David McKail, M.D., D.P.H., and William Jones. Pp. 72. London: The Fabian Society. 1s. net.

This little book has been compiled as a specific contribution for discussion and criticism. It is, we believe, the first in which is put forward a considered scheme for organizing a Public Medical Service with the probable cost of such a service. The ground has been explored very thoroughly, and the scheme suggested is based upon exact calculations. The question has got to be faced and solved in the immediate future, and it must be determined along the lines taken by the authors of this book. We commend the book as what it is intended to be—a contribution towards a full discussion on broad lines which, we trust, will be kept on a high level far removed from the degrading squabbles over the Insurance Bill.

Preparations, Inventions, Etc.

SAPON SOAPS.

(London : Sapon Soaps Ltd., 24 and 25, King William Street, E.C.4.)

In the Sapon soaps the alkaline bases are combined with selected vegetable material from such products as maize, linseed meal, and others containing starches, and not with fatty acids of animal origin as in the case of ordinary soaps. The protein-carbohydrate bodies are not precipitated by the calcium in water, so that no waste occurs in use, whereas calcium forms an insoluble compound with the fatty acids in ordinary soaps, and thus an appreciable portion is rendered inert for usefulness.

Comparative tests have been made with ordinary curd soap, and these prove that the Sapon soaps are very much less irritative in effect upon the skin and the more delicate tissues such as the conjunctivæ, whilst the fatty matters exuded from the skin are much more easily and thoroughly removed.

The soaps can, therefore, be recommended for ordinary use as well as in skin diseases, because their use promotes a healthy action of the skin by clearing away all materials clogging the pores without setting up the least irritation on the most tender skins.

ADJUSTABLE ARCH-SUPPORT.

(London : Salmon Ody, Ltd., 7, New Oxford Street, W.C.1.)

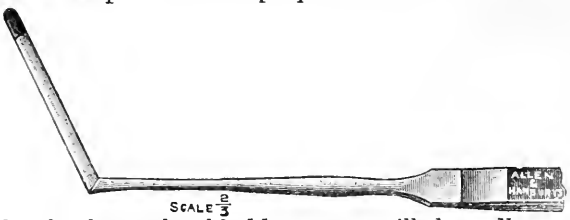
This new invention has just been placed upon the market, and it is claimed that it has special advantages for those suffering from flat feet. It is quite light in weight, and soft and springy, yet is quite strong and does not break across, a common fault of such appliances. It supports the side as well as the arch of the foot, affording ease and comfort in wearing. It can be adjusted in height to suit each individual case.

A "VAGINOTOME."

(London : Messrs. Allen and Hanburys, Ltd., 48, Wigmore Street, W.1.)

This instrument has been designed by Mr. A. W. Bourne for use, in Wertheim's operation, in the final division of the vagina after the application of the Berkeley-Bonney T-shaped vaginal clamp. The use of a scalpel or of scissors renders this step one of the most difficult in the operation. Mr. Bourne's instrument has a handle, eight inches in length, which enables the cutting blade to be used deeply in the pelvis without pulling unduly upon the clamp and stretching the vagina. The knife is set at an obtuse angle on the

handle, which allows the incisions to be made horizontally under the clamp. For this purpose the handle is held in a vertical position and slightly tilted so that the tendency is to cut across the vagina close to the clamp instead of more deeply at a lower level where the bladder may still be adherent to the vagina. The instrument has a blunt end so as to safeguard the rectum from being wounded.



The knife gives a perfectly clean section through the vagina, without the ragged edge which so often follows the use of scissors or an ordinary scalpel. As no heavy traction is made upon the clamp when the section is being made, this step in the operation is rendered much easier.

AMBRIODIN (CENTAUR).

(London : The Centaur Chemical Co., Ltd., Barrishaw House, Basinghall Street, E.C.2.)

This preparation is issued in tablets, each of which contains 5 gr. of bromide of ammonium and 1 gr. of iodide of potash, together with certain laxatives.

The tablets are recommended for use in epilepsy, two to six being given morning and evening in plenty of warm water, half a tumblerful.

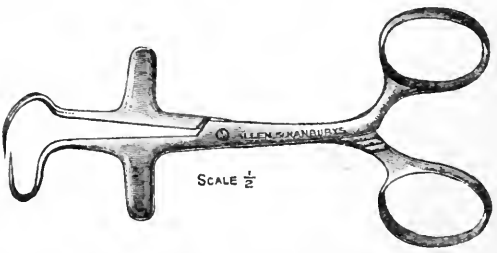
One or two tablets twice a day have been found of service in the treatment of neurasthenia, general depression, nervousness, stage-fright, general debility, and so forth.

The tablets are tasteless and easily assimilated.

TONGUE FORCEPS.

(London : Messrs. Allen and Hanburys, Ltd., 48, Wigmore Street, W.1.)

Dr. Corbould has devised an improvement on the older pattern of tongue forceps, whereby rotation of the forceps when in use is prevented by the provision of two wings. The forceps grip the tongue about half an inch from the tip. The tongue is pulled out by swinging the forceps round to the opposite cheek. Being made so as to lie flat upon the face, there is no leakage caused when a closed anæsthetic mask is being used.



MODERN SOAPS.

IN WHICH EXPENSIVE FATS AND OILS ARE SUBSTITUTED BY ELEMENTARY VEGETABLE MATTERS, WITH FAR GREATER HYGIENIC VALUES AT LESS COST.

For some two thousand years soaps have been continuously made by more or less perfectly combining fatty acids and alkali, with occasional improvements in the methods of manufacture designed to ensure greater uniformity of product and to lessen the cost.

This historical period has permitted the growth of a confirmed prejudice in favour of the grease and alkali compound which is difficult to shake, much less to overcome. It is apparently argued that a thing which has survived so long must necessarily be "*it*" and essentially unalterable or improvable save in details.

The answer to this argument is that the thing has been altered and improved, as witness the "SAPON" Soaps.

In these soaps oils and fats are used simply as subsidiary adjuncts, and as a sacrifice to popular prejudice, without vitiating the properties of the *aminoamylic compounds*, which, in the "SAPON" process, substituted the fatty acids of the old processes. These newly-created compounds yield soaps having far greater hygienic and economical values than can be obtained with fat soaps.

The *aminoamylic compounds* are peculiar, inasmuch as they are capable of acting either as weak acids or as weak bases, but hitherto only as producing such slight chemical action that the bases or acids are recoverable easily, unless, as sometimes happens, decomposition of the *aminoamylic* acid sets in.

But the inventors of the "SAPON" Soaps have, after many years of diligent experiment and study, discovered that if the protein and carbohydrates are attacked by alkalies in a particular manner, they are converted into *aminoamylic* acids which, at the same time, combine with the alkali employed. In this condition of combination profound chemical and physical actions have taken place, the protein-carbohydrates having become soluble and irrecoverable as such.

Nevertheless the combination of acid and alkali is less stable than is the combination of fatty acid and alkali in fat soaps, and hence arises an inestimable advantage economically and physiologically considered.

In use, ordinary fat soaps emulsify the dirt preparatory to its removal. They are never decomposed and are recoverable.

The "SAPON" Soaps, in addition to being emulsifiers, have the property that if the dirt or matter to be removed has an acid character, as is usually the case, the said matter is both emulsified and saponified by the relatively free alkali of the soap. The dirty matter is thus made (by being saponified) to aid in its own removal.

The alkali, moreover, differs from the alkali of fat soaps since it consists of soda and ammonia, instead of soda only. This ensures a milder but equally effective action. The ammonia is derived from the amino groups in the *aminoamylic* acids by and during the process of manufacture.

In the majority of skin diseases the excreted matter consists of the several sebasic acids which are saponified by the alkalies derived from the "SAPON" Soaps as above described, and are thus compelled to assist in their own removal, and the cleansing of the epidermis.

It has been erroneously stated that the purifying effect of the soaps on skin diseases is owing to some mysterious antiseptic action, but this is not the case; the "SAPON" Soaps (except the Tar Soaps) have only slightly greater antiseptic action than ordinary soaps. Moreover, a soap is not a suitable agent for the application of antiseptics of the more generally useful character, such as biehloride and biniodide of mercury, which are decomposed, but only for special antiseptics such as tars and their derivatives.

Even these tar derivatives are of slight use when used in hard and salt waters in ordinary soaps, for they are immediately combined with the lime, magnesia, etc., and become insoluble and ineffective. On the contrary, the lime and magnesia salts formed with "SAPON" Soaps are soluble and remain effective. Here we have the reason why, more than in any other soaps, the "SAPON" Russian Tar Soaps gives such comparatively wonderful results in irritable skin diseases such as Seborrhœa, Scabies, Eczema, Pruritis, Acne and in insect bites and stings.

For these special purposes a thick lather of the soap may be applied and allowed to dry, or, when permissible, the skin may be moistened and the soap rubbed on the part affected.

FREE SAMPLES WILL BE SENT TO ANY MEMBER OF THE MEDICAL PROFESSION, ON RECEIPT OF A POSTCARD, BY

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APPOINTMENTS.

No charge is made for the insertion of these notices: the necessary details should be sent before the 18th of each month to The Editor, THE PRACTITIONER, Howard Street, Strand, London, W.C. 2, to secure inclusion.

ALLAN, J., M.D. Edin., appointed Lecturer on Public Health, Westminster Hospital Medical School.

BEATTY, C. C., M.C. M.B. Lond., M.R.C.S., L.R.C.P. Lond., appointed Medical Registrar to the London Hospital.

CHATFIELD, H. T., M.B., B.Ch., B.A.O. Belfast, appointed Tuberculosis Medical Officer by the Plymouth Town Council.

DARBYSHIRE, J., L.R.C.P. & S. Edin., appointed Medical Officer for Woodbury, Aylesbeare and Farringdon (Devon).

DENT, PATRICIA, M.B., B.S. Lond., appointed Assistant Medical Officer for Maternity and Child Welfare and Assistant to the School Medical Officer for the County Borough of Wolverhampton.

DEPREE, H.T., appointed Medical Officer and Public Vaccinator for the No. 1 District, Exeter.

DOBBYN, M. G., F.R.C.S., L.R.C.P. Irel., appointed Honorary Surgeon to the Bristol Eye Dispensary.

FAIRCLOUGH, H., M.B., B.S., appointed Medical Officer in X-ray and Electrical Department of the Royal Infirmary, Sunderland.

GARDINER, C. E. R., L.R.C.P.I., L.R.C.S.I., appointed Medical Officer to the Londonderry and Lough Swilly Railway, Dungloe.

HANNAY, M. G., M.D. Brux., F.R.C.P.E., appointed Honorary Assistant Physician to St. John's Hospital for Diseases of the Skin, Leicester Square, W.C.

HARPER, R. SYDNEY, M.R.C.S. Eng., L.R.C.P. Lond., F.R.M.S., Capt. R.A.M.C., appointed Medical Officer in Charge of the Ministry of Pensions, Psycho-therapeutic Clinic, Brighton, and also Approved Neurological Specialist, under the Ministry.

HARRIES, D. H. R., M.D. State Med. Lond., D.P.H., appointed Medical Superintendent of the Birmingham City Hospital, Little Bromwich.

HEMMANS, L. F., M.B., B.S. Durh., F.R.C.S.E., appointed Honorary Surgeon to Out-patients, St. John's Hospital, Lewisham.

HUNT, E. R., M.D., B.C. Cantab., M.R.C.P. Lond., appointed Honorary Assistant Physician to the Royal Sussex County Hospital.

IVES, W. F. H., L.R.C.P. & S. Edin., L.F.P. & S. Glasg., appointed Honorary Assistant Physician to the Electro-Therapeutic Department of the Royal South Hants and Southampton Hospital.

JOHNSTONE, W., M.D., B.Ch. Glasg., D.P.H. Camb., appointed Medical Officer of Health and School Medical Officer, City of Peterborough.

LEE, H., M.B. Camb., F.R.C.S. Eng., appointed Specialist Medical Referee under the Workmen's Compensation Act, 1906, for County Court Circuits Nos. 12 and 14, with a view to his being employed in ophthalmic cases.

LEITCH, J. N., M.B., B.S. Lond., M.R.C.S., L.R.C.P., appointed Medical Officer in charge Electrical Department, Queen Mary's Hospital for Children (M.A.B.), Carshalton, Surrey, and Clinical Assistant Electrical Department, St. Bartholomew's Hospital.

ORMEROD, H. L., M.D., B.Ch. B.A.O., R.U. Irel., appointed Honorary Surgeon to the Bristol Eye Dispensary.

PARSONS-SMITH, B., M.D., M.R.C.P., appointed Assistant Physician to the National Hospital for Diseases of the Heart.

POOLER, H. W., M.B., Ch.B., M.R.C.S., L.R.C.P., appointed Visiting Medical Officer to Morton District Hospital.

PRICE, F. W., M.D., F.R.S. Edin., appointed Physician to the National Hospital for Diseases of the Heart.

PYBUS, F. C., M.S., F.R.C.S., appointed Assistant Surgeon to the Royal Victoria Infirmary, Newcastle-on-Tyne.

RIGBY, R. A. C., L.R.C.P., & S. Edin., appointed Honorary Medical Officer in charge of the X ray and Electro-Therapeutic Department at the General Hospital, Nottingham.

RYLAND, A., F.R.C.S. Edin., appointed Oto-Laryngologist to the Whipps Cross Infirmary, Leytonstone.

SHARPE, H., B.A., L.R.C.P., M.R.C.S., appointed Tuberculosis Officer, for the Northern Area of Staffordshire.

SPENCE, D. LEIGH, M.A., M.B. Cantab., M.R.C.S., L.R.C.P., appointed (1) Certifying Factory Surgeon for Melksham, (2) Medical Officer of Health, Melksham Urban District.

STUTTAFORD, F. H., M.R.C.S. L.R.C.P. Lond., appointed Certifying Surgeon under the Factory and Workshop Acts for Markfield.

SUTCLIFFE, J., M.R.C.S. Eng., L.R.C.P., Edin., appointed Resident Medical Superintendent of Cheadle Royal Hospital for Mental Diseases, Cheadle, Cheshire.

SYLK, E., M.B. Lond., M.R.C.S. Eng., appointed House Surgeon at the Great Northern Central Hospital.

VAILE, T. B., M.R.C.S., L.R.C.P., appointed Anæsthetist to the Cancer Hospital, Assistant Anæsthetist to the Italian Hospital, Hon. Anæsthetist to the Royal Dental Hospital.

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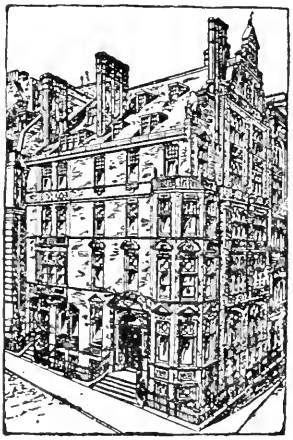
NOTICES.

THE PRACTITIONER,
Howard Street, Strand,
LONDON, W.C.2

EDITORIAL.

Communications relating to the Editorial Department must not be addressed to any individual member of the profession on the staff, but to The Editor, "THE PRACTITIONER," Howard Street, Strand, London, W.C.2

Original articles, clinical lectures, medical society addresses, and interesting "cases" are invited, but are only accepted upon the distinct understanding that they are published exclusively in "THE PRACTITIONER." Unaccepted MS. will not be returned unless accompanied by a suitable stamped addressed envelope.



The building of "THE PRACTITIONER," The Leading Monthly Medical Journal, Howard Street, Strand, London.

BUSINESS.

Letters relating to the Publication, Sale, and Advertisement Departments must be addressed to "THE MANAGER." The rate of ANNUAL SUBSCRIPTION to "THE PRACTITIONER" is 50s. post free; Single Copies 4s.

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